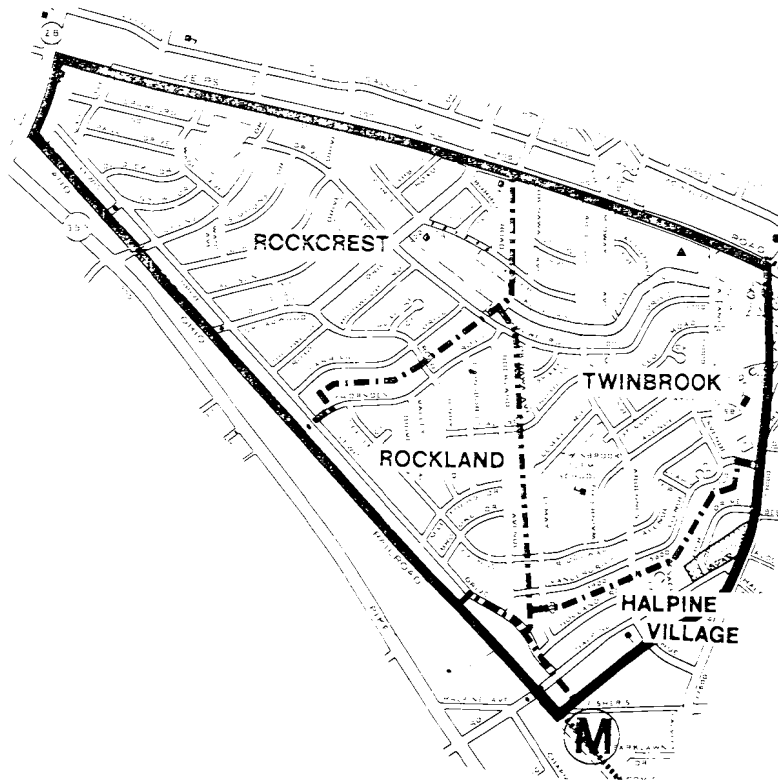




TWINBROOK NEIGHBORHOOD PLAN (Planning Area 8)

Approved and Adopted
February 8, 1982



City of Rockville, Maryland

TITLE: Twinbrook Neighborhood Plan

AUTHOR: City of Rockville, Department of Planning

SUBJECT: Presentation of a Comprehensive Plan for the physical, economic and social development of Planning Area 8 (Twinbrook Neighborhood) of Rockville, Maryland

DATE: February 8, 1982

PLANNING AGENCY: City of Rockville, Department of Planning

SOURCE OF COPIES: Department of Planning, City Hall, 111 Maryland Avenue, Rockville, Maryland 20850

PRICE: \$2.00

NUMBER OF PAGES: 68

ABSTRACT:

The Twinbrook Neighborhood Plan for Planning Area 8 of Rockville, Maryland is first in a series of reports concerning evaluation of residentially oriented subareas within the City of Rockville. It represents a comprehensive treatment of the components which combine to maintain or establish a stable residential area adjacent to a Metrorail Station. This plan sets forth the local legislative body's policies and public actions which will guide future decisions and implementation strategies to preserve, strengthen, and stabilize that residential neighborhood. The specific planning and development policies were closely coordinated with neighborhood residents and represents an extension of development, land use, zoning, circulation, housing, and community facility policies contained in the 1970 Master Plan for Rockville, Maryland.

The results of that process are summarized below:

Land Use and Zoning Element - Maintain primary residential land use and limit all commercial and industrial uses to existing sites. (See text, p. 11).

Housing Element - Preserve and enhance existing single family housing and promote new additions to the housing stock which maintain the general character of the residential area. (See text, p. 19).

Circulation Element - Circulation patterns should reinforce the stability of the Twinbrook Neighborhood Planning Area and encourage alternatives to automotive transportation. (See text, p. 27).

Community Services and Facilities Element - Provide Twinbrook Planning Area with the best possible community services and maintain high quality in all facilities within the neighborhood boundaries. (See text, p. 41).

APPROVED AND ADOPTED TWINBROOK NEIGHBORHOOD PLAN

**AN AMENDMENT TO THE 1970 PLAN
FOR ROCKVILLE, MARYLAND**

FEBRUARY 8, 1982

**MAYOR AND COUNCIL OF THE
CITY OF ROCKVILLE, MARYLAND**



William E. Hanna, Jr.
Mayor

Stephen Abrams
Councilman

John R. Freeland
Councilman

Phyllis B. Fordham
Councilwoman

John Tyner II
Councilman

Larry N. Blick
City Manager

Helen M. Heneghan
City Clerk

Roger W. Titus
City Attorney

James M. Davis
Director of Planning

ORDINANCE: To adopt the "Twinbrook
Neighborhood Plan" as an
amendment to the adopted
Master Plan for Rockville.

WHEREAS, the City of Rockville Planning Commission (hereinafter referred to as the Commission), under the provisions of Section 3.07 of Article 66B of the Annotated Code of Maryland may recommend adoption of a Plan for the whole or any part of the City, and may recommend adoption of any amendment or extension of or addition to the Plan; and

WHEREAS, pursuant to Section 3.08 of Article 66B of the Annotated Code of Maryland, the Mayor and Council of Rockville did, by Ordinance No. 14-73, adopt, with amendments, the 1970 Master Plan for Rockville as the Plan for the City of Rockville; and

WHEREAS, the Mayor and Council did instruct the Commission in the Master Plan to proceed to formulate and detail individual plans for neighborhoods in the City, pursuant to requirements contained in Section 3.05 of Article 66B of the Annotated Code of Maryland, it being the intention of the Mayor and Council that such plan(s) become an amendment to the Plan for the City of Rockville; and

WHEREAS, the Commission did cause to have prepared, pursuant to the provisions of Article 66B of the Annotated Code of Maryland, a plan for the Twinbrook Neighborhood Planning Area, entitled "Twinbrook Neighborhood Plan," and in preparation thereof did make careful and comprehensive surveys and studies of present conditions and future growth of the Twinbrook Neighborhood Planning Area, with due regard to its relation to neighboring property and territory; and

WHEREAS, said "Twinbrook Neighborhood Plan" was prepared with the general purpose of guiding and accomplishing the coordinated, adjusted, and harmonious development of the Twinbrook Neighborhood Planning Area and the City which will, in accordance with the present and future needs of said area and of the City, best

promote the health, safety, morals, order, convenience, prosperity, and general welfare, as well as efficiency and economy in the process of development; including, among other things, adequate provision for light and air, conservation of natural resources, the prevention of environmental pollution, the promoting of the healthful and convenient distribution of population, the promotion of good civic design and arrangement, wise and efficient expenditure of public funds, and the adequate provision of public utilities and other public requirements; and,

WHEREAS, after the preparation of said "Twinbrook Neighborhood Plan," the Commission gave notice of the time and place of a public hearing to be held on said "Twinbrook Neighborhood Plan" as an amendment to the Plan for the City of Rockville by giving notice in a newspaper of general circulation in the City; and

WHEREAS, the Commission did refer a copy of said "Twinbrook Neighborhood Plan" to all adjoining planning jurisdictions, and to all State and local jurisdictions that have responsibility for financing or constructing public improvements necessary to implement the "Twinbrook Neighborhood Plan," at least sixty (60) days prior to the hearing; and

WHEREAS, the Commission held a joint public hearing with the Mayor and Council of Rockville on said "Twinbrook Neighborhood Plan" in the Council Chamber at City Hall in Rockville, Maryland, on December 16, 1981; and

WHEREAS, the Commission, having considered the testimony presented at said public hearing did, by Resolution No. 1-82, recommend the adoption of the "Twinbrook Neighborhood Plan" for the City of Rockville; and

WHEREAS, under the provisions of Section 3.08 of Article 66B of the Annotated Code of Maryland, the Mayor and Council shall adopt amendments to the Plan of the City of Rockville; and

WHEREAS, the "Twinbrook Neighborhood Plan," as adopted below, makes specific recommendations intended to improve the appearance and function of the Twinbrook Neighborhood Planning Area and shall serve as a guide to public and private actions and decisions to insure the development of public and private properties in appropriate relationships:

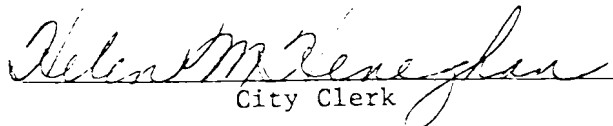
NOW, THEREFORE, BE IT ORDAINED BY THE MAYOR AND COUNCIL OF ROCKVILLE, MARYLAND, as follows:

1. That the "Twinbrook Neighborhood Plan" be and the same is hereby adopted as an amendment to the Plan for the City of Rockville, said "Twinbrook Neighborhood Plan" consisting of the following:
 - a. The publication entitled "Twinbrook Neighborhood Plan - Rockville, Maryland, dated January 20, 1982;
 - b. An errata sheet identifying errors in the original printed "Twinbrook Neighborhood Plan" discovered after its printing;
 - c. An addendum sheet identifying information to be added to the "Twinbrook Neighborhood Plan" which the Mayor and Council deems necessary and appropriate to the full and detailed presentation of the goal, objective, policies, and requirements herein adopted.

* * * * *

I hereby certify that the foregoing is a true and correct copy of an Ordinance adopted by the Mayor and Council of Rockville at its meeting 2/8/82.

OTE: Items 1.b., and c. above have been incorporated as appropriate into the revised Plan for purposes of clarity and continuity. A complete copy of the approving Resolution 6-1-82 is available in the Department of Planning.


City Clerk



PLANNING COMMISSION

Granville E. Paules
Chairman

Leah Barnett
Commissioner

Lewis T. Dale
Commissioner

Carlos E. Caban
Commissioner

Frances Manderscheid
Commissioner

James M. Davis
Director of Planning

Resolution No. 1-82

RESOLUTION: To approve and recommend the adoption of the "Twinbrook Neighborhood Plan" as an amendment to the Adopted and Approved Plan for the City of Rockville, Maryland.

WHEREAS, the City of Rockville Planning Commission (hereinafter referred to as the "Commission"), under the provisions of Section 3.07 of Article 66B of the Annotated Code of Maryland may recommend adoption of any amendment for the whole or any part of the City, and may recommend adoption of any amendment or extension of or addition to the Plan; and,

WHEREAS, the Commission previously adopted a Master Plan for the City of Rockville, Maryland on July 29, 1970; and,

WHEREAS, the Mayor and Council did instruct the Commission through the 1970 Master Plan to proceed to formulate and detail neighborhood plans for Rockville pursuant to requirements contained in Article 66B, Section 3.05 of the Annotated Code of Maryland, it being the intention of the Mayor and Council that the final neighborhood plans become amendments to the Plan for the City; and,

WHEREAS, the Commission did cause to have prepared pursuant to Section 3.05 of Article 66B of the Annotated Code of Maryland, a plan for the Twinbrook neighborhood of Rockville, Maryland, entitled "Twinbrook Neighborhood Plan;" and,

WHEREAS, the Commission in preparation of said "Twinbrook Neighborhood Plan," which corresponds to a major geographical section of the City as defined therein, did make careful and comprehensive surveys and studies of present conditions and future growth within the Twinbrook Planning Area, with due regard for its relation to neighboring property and territory; and,

WHEREAS, the "Twinbrook Neighborhood Plan" was made with the general purpose of guiding and accomplishing the coordinated, adjusted and harmonious development of a section of Rockville and its environs which will, in accordance with present and future needs, best promote health, safety, morals, order, convenience, prosperity, and general welfare, as well as efficiency and economy in the process of development, including among other things, adequate provision for traffic, and promotion of public safety, adequate provision for light and air, conservation of natural resources, the prevention of environmental pollution, the promotion of good civic design and arrangement, wise and efficient expenditure of public funds, and the adequate provision of public utilities and other public requirements; and,

WHEREAS, after the preparation of said "Twinbrook Neighborhood Plan" as a proposed amendment to the Plan for the City, the Commission gave notice of the time and place of public hearings to be held on said Twinbrook Neighborhood Plan as an amendment to the Plan for the City by giving notice in a newspaper of general circulation in the City; and,

WHEREAS, the Commission did refer copies of said "Twinbrook Neighborhood Plan" to all adjoining planning jurisdictions, and to all State and local jurisdictions that have responsibility for financing or constructing public improvements necessary to implement the "Twinbrook Neighborhood Plan," at least sixty (60) days prior to the public hearing; and,

WHEREAS, the Commission held a joint public hearing with the Mayor and Council of Rockville, Maryland on said "Twinbrook Neighborhood Plan" in the Council Chamber at City Hall, in Rockville, Maryland, on December 16, 1981; and,

WHEREAS, the Planning Commission did take into consideration testimony presented at said public hearing and now desires to present its recommendations for an amendment to the Plan for the City of Rockville, Maryland; and,

WHEREAS, this "Twinbrook Neighborhood Plan" is intended to focus public attention on fundamental aspects of City planning and to present a series of specific action recommendations intended to improve the appearance, design, function, and stability of Rockville's neighborhoods; and,

WHEREAS, the neighborhood planning and development policies recommended in the "Twinbrook Neighborhood Plan" have been closely coordinated with and represent an extension of development, land use, zoning transportation, housing, and public facility policy contained in the Plan for the City of Rockville, Maryland.

NOW, THEREFORE, BE IT RESOLVED by the Planning Commission of Rockville, Maryland, as follows:

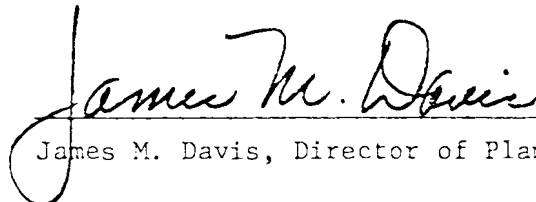
1. That the "Twinbrook Neighborhood Plan" be and the same is hereby approved and recommended for adoption by the Mayor and Council of Rockville, Maryland pursuant to Article 66B, Section 3.08 of the Annotated Code of Maryland as an amendment to the Plan for the City of Rockville, Maryland. The "Twinbrook Neighborhood Plan" consists of the following:
 - a. The publication entitled the "Twinbrook Neighborhood Plan" - Rockville, Maryland, as January 20, 1982.
 - b. An errata sheet identifying errors in the original printed "Twinbrook Neighborhood Plan" discovered after its printing.

- c. An addendum sheet identifying information be to added to the "Twinbrook Neighborhood Plan" which is deemed necessary and appropriate to the full and detailed presentation of the goal, objective, policies, and requirements herein approved and recommended for adoption.

* * * * *

I certify that the above is a true and correct copy of a Resolution adopted by the Planning Commission of the City of Rockville, Maryland, at its meeting of January 20, 1982.

NOTE: Items 1.b., and c. above have been incorporated as appropriate into the revised Plan for purposes of clarity and continuity. A complete copy of the approving Ordinance No. 6-82 is available in the Department of Planning.


James M. Davis, Director of Planning

NEIGHBORHOOD PLANNING ADVISORY GROUP

FOR

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INTRODUCTION

TWINBROOK NEIGHBORHOOD PLAN

INTRODUCTION

The Twinbrook Neighborhood Plan is one of the first in a series of detailed neighborhood planning documents to be prepared subsequent to the adoption of the 1970 Master Plan. Neighborhood plans are an effort to integrate local concerns with long range planning policies and programs at the city-wide level. Strong neighborhood identification and cohesion of Twinbrook residents has long been a recognized force within the City. This distinctly defined homogeneous neighborhood is located in the southeastern quadrant of the City of Rockville. The Twinbrook Neighborhood incorporates four major subdivisions, including Rockcrest (and Additions to Rockcrest), Rockland, Twinbrook and the Halpine Village area. This 490 acre (3/4 square mile) area has 1,799 homes and an estimated population of approximately 5,719 residents.¹

The purpose of preparing this document is essentially threefold: first, to involve residents of the neighborhood in highlighting issues and developing recommendations for action on problems affecting the community, acceptable to local residents, the Planning Commission, and the Mayor and Council; second, to prepare a neighborhood plan; and third, to evaluate the potential impact on the area around the future Metrorail Station.

NEIGHBORHOOD CONCEPT

The Twinbrook Neighborhood is more than a geographic location within the City of Rockville. Residents in Twinbrook are generally conscious of its existence, and share concern over its continued well-being. This "sense of community" describes the scale of the neighborhood in providing community services such as schools and parks within easy walking distance. This concept is not limited exclusively to public investments, but ideally includes places of work and opportunities to shop in close proximity to residences.

¹ Preliminary Census of Population, Department of Commerce, July 1980.

The Twinbrook Neighborhood is an excellent example of all these factors existing in the community. Only responsible planning, increased community awareness, and protection from changes in land use can preserve and enhance this stable community.

A fundamental point of the 1970 Master Plan was to provide a framework for making Rockville the best possible residential community. The desire for a stable community is most strongly supported by the 1970 Master Plan Goal on Preservation of established neighborhoods. This goal states that:

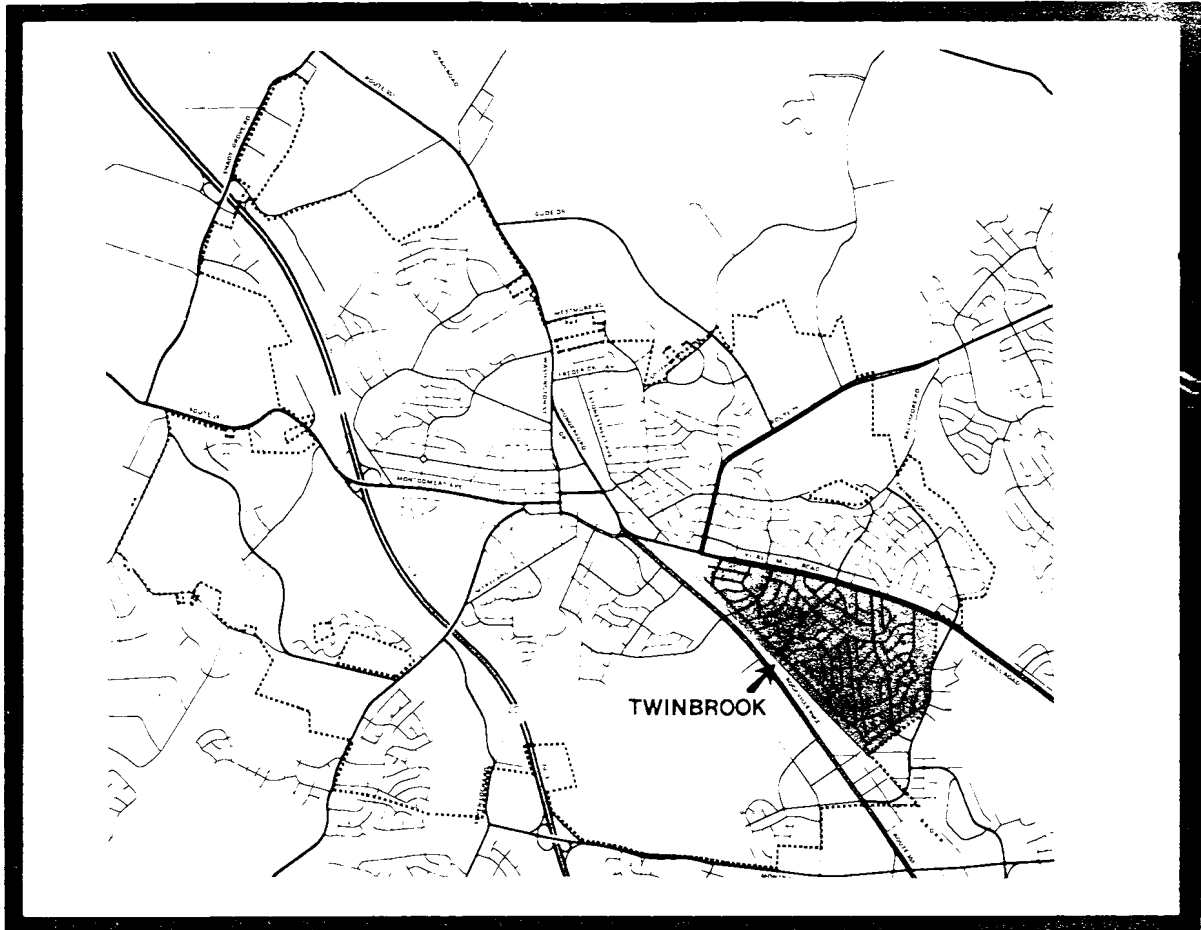
Established neighborhoods will be maintained in their pre-dominate residential character, and protected from the intrusion of unwarranted traffic and blighting influence of commercial, industrial, and incompatible nonresidential development.*

The implication of this goal at the neighborhood level would assure a continued pattern of single family, detached (R-60 density) and allow no expansion of current industrial or commercial establishments beyond existing acreage, and minimize ingress by nonresidential traffic.

Two additional points from the 1970 Master Plan are pertinent to the previously discussed goal, objective, and policies with respect to the process of preparing a Neighborhood Comprehensive plan.

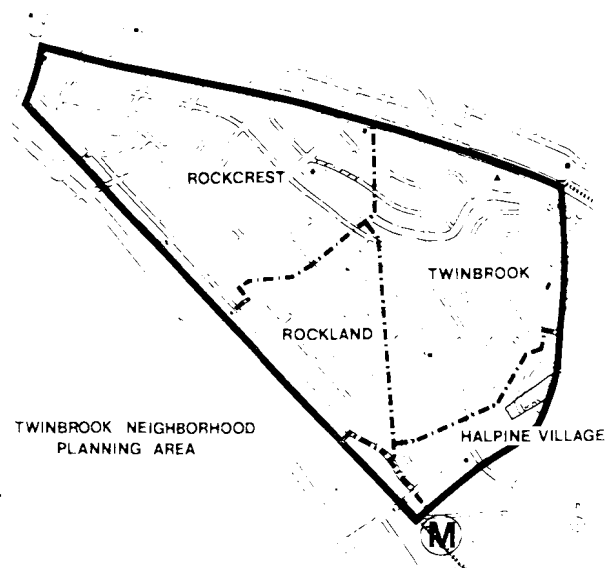
- That people will continually have an opportunity and be encouraged to participate in planning for their community, and most directly in the plans for their own immediate neighborhoods.*
- That the overriding policy will be to improve the quality of life for the City's existing and future residents.*

*Master Plan, City of Rockville, Mayor and Council, 1970, p. 2.



NEIGHBORHOOD PLANNING AREA BOUNDARY

The Planning Commission, in conjunction with the Twinbrook Neighborhood Planning Advisory Group, has established the following area as defined by census tract (7011.02), as a homogeneous neighborhood bounded on the north by Veirs Mill Road, on the east by the City limits, on the south by B&O and Metrorail lines, and on the west by the future First Street extension. These limits are distinct political and manmade barriers. Residents can easily walk to most destinations within the planning area, and closely identify with the immediate community.



DEVELOPMENT HISTORY

The earliest parts of the Twinbrook community were developed before the City of Rockville annexed this planning area in July of 1949. The "circle annexation," as it was known, was Rockville's second "mass annexation." The 2,210 acre annexation was the second annexation to exceed 100 acres, as well as being the largest annexation ever attempted by the City of Rockville. When this addition to Rockville occurred, the City's size increased from 542 acres to 2,752 acres or an increase of 507 percent. Several other areas were included in the annexation besides Twinbrook. These were Broadwood Manor, Hungerford Towne, Lincoln Park, and some land north and west of the City.

The earliest homes recorded in the Twinbrook Neighborhood Planning Area were found in the Rockcrest Subdivision along Gail Avenue in September 1940. This predates the circle annexation mentioned and Home Rule, which was instituted in 1954. Rockcrest was followed by Twinbrook from 1949 to 1952, and Rockland in the early 1950's. Twinbrook and Rockcrest were part of the post-war veteran housing wave, which proceeded up Veirs Mill Road by virtue of the Veteran Emergency Housing Act of 1946. No further additions were made until Halpine Village was constructed in 1955-56. Rockland was recently completed residentially when the last eleven plots were developed at the corner of Lewis and Rockland Avenues in July 1976. At this time, no further residential development is anticipated in the planning area.

Ironically, the new developments along Veirs Mill Road created a new political alignment in the City of Rockville in the early 1950's. The Rockville water supply failed in June 1953 in the middle of a hot, dry spell, and no one at City Hall seemed to know why it had happened or how it could be corrected. In the meantime, a civic association inquiry had also discovered a sewage disposal crisis. Out of the frustration that grew from confronting these problems was born the Citizens for Good Government Organization, whose reform ticket was elected for Mayor and Council in 1954,* the same year Home Rule was instituted.

Today, Twinbrook is a quiet, stable area which is over 95 percent residential. High density, single family, detached units dominate the landscape. It is located conveniently to local and regional shopping

*A Grateful Remembrance. The Story of Montgomery County, Maryland, Rockville: Montgomery County Government, R.K. MacMaster and R.E. Hiebert, 1976, p. 67-68.

areas, and has easy access to several major traffic corridors leading to Washington, D.C., or other locations within Montgomery County. Despite this high degree of accessibility, to be supplemented further by Metrorail, the neighborhood is relatively insulated from external pressures. This neighborhood provides modest value homes in a desirable location. The major goal of this plan is to maintain this area from any future attempts of encroachment, and avoid changing a strong community.

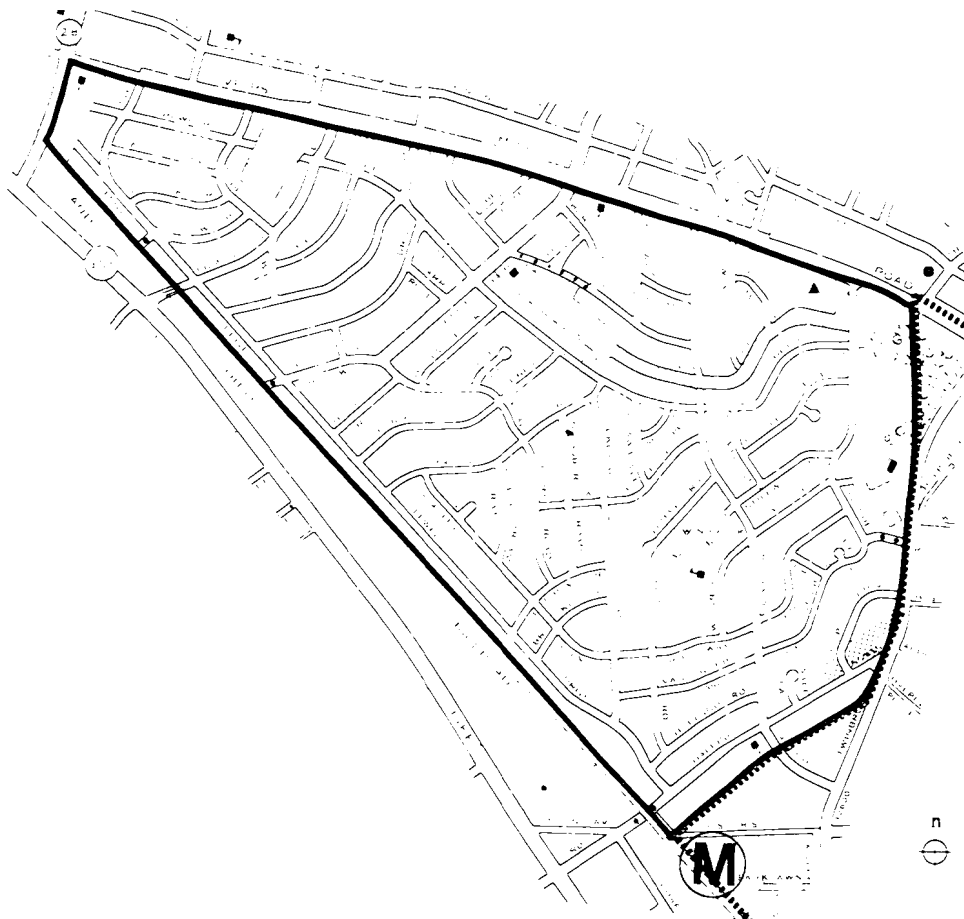
ISSUES AND GOALS

ISSUES AND GOALS

The Twinbrook Neighborhood Plan is the first step in a continuing process of monitoring the effects of an adjacent rapid rail transit station on a residential area within the City. The Twinbrook planning area has started to feel the pressures of Metro. In order to address new and heightened pressures likely to occur when Metrorail service begins, this plan must be periodically evaluated in order to ascertain whether neighborhood sentiments continue to be reflected in the plan, or if changing conditions require new measures. The Twinbrook Neighborhood is a unique unit within the City, which is being affected by the Parklawn Federal Health and Human Services Agency, and by new office development along Rockville Pike, and as a short-cut between transit corridors within the City. This neighborhood has very stable boundaries, and will remain vital over time, with special attention to internal neighborhood stability and appearance.

Process

The first step in any comprehensive planning process is to identify issues and needs of the planning area being studied. For this purpose, a special advisory group, comprised of residents within the area,



was created to consider this at a strictly neighborhood level. Problem identification was performed through a series of open, publicized meetings which were held in the neighborhood. This process permitted recognition of basic neighborhood attitudes towards the community and the areas surrounding the neighborhood area.

Problems facing the Twinbrook area, both existing and anticipated, were specified. This chapter briefly discusses the issues, needs, and basic assumptions developed, and furnishes the framework for the neighborhood plan, as devised. The goal, objectives, and major policies adopted largely convey the community's attitudes for the future of Twinbrook.

The intent of this Neighborhood Plan is to establish the concerns for neighborhood vitality and preservation, assess the impact of Metrorail and related transit changes on the community, and provide a new, detailed, small area plan which reflects the interest of Twinbrook residents toward enhancing the area as a living environment.

Plan Elements

The Land Use and Zoning Element sets forth the general standards for existing and anticipated uses in the Twinbrook area. This is a key component in assisting policy makers in reviewing private sector development for conformance with neighborhood objectives.

The Housing Element considers the effect the environment, home maintenance, and speculative investment have on neighborhood attitudes and the direct impact on housing values.

The Circulation Element evaluates existing problems and future options in the area of traffic circulation, parking management, mass transit, and pedestrian/bikeway alternatives. Options are reviewed, and some are recommended.

The Community Services and Facilities Element brings in all City services having an impact on/or delivering any type of services to the Twinbrook Planning Area. A brief profile of the population is presented, facilities are identified, and service areas are reviewed.

This plan should be reviewed on an annual basis. Additionally, a special, comprehensive review should occur after Metrorail service has commenced. The City as a whole, and Twinbrook as a unique part, continues to be guided by the 1970 Master Plan of the City of Rockville.*

*Master Plan, City of Rockville, Planning Department, 1970.

SUMMARY OF FOUR PRIMARY ISSUES

1. Neighborhood Stability

The entrance of Metrorail service combined with speculative investment could cause dramatic change in property values, which may affect ownership patterns and types of owners. In Twinbrook, 35 percent of both homeowners and renters expect to move out of the Twinbrook Neighborhood by 1986. This is fairly normal for the region. Although, housing price increases have already been occurring, this does not appear to be due to Metro. Changes in the character of the neighborhood due to housing price increases and investment can have a marked effect on neighborhood attitudes and appearance. The Twinbrook population includes ten percent renters, who are usually a more transient population group than homeowners.

The issue of neighborhood stability is discussed under the Land Use and Zoning Element and the Housing Element. Policies, 1, 2, and 3 lend pertinent direction.

2. Street Environment

Since many homes do not have driveways (standards of the day did not require off-street parking), on-street parking is a problem, which is further aggravated by narrow streets and nearby commuters using Twinbrook streets for parking. The impact of Metrorail operations will affect the Twinbrook community through increased vehicular traffic, declining air quality, and higher noise levels.

The issue of street environment is discussed under the Circulation and Community Services and Facilities Elements. Policies 5, 6, and 7 lend pertinent direction.

3. Pedestrian/Vehicle Conflicts

Pedestrian access to shopping areas is poor and requires difficult and unsafe crossing of Veirs Mill Road. This problem is also encountered by students walking to Broome Middle School and Lone Oak Elementary. No alternative transportation is available.

The issue of pedestrian/vehicle conflicts is discussed under the Circulation and Community Services and Facilities Elements. Policy 4 lends pertinent direction.

4. Community Facilities/Public Services

Access to recreation areas and maintenance in these areas is inadequate, particularly in the Twinbrook Mart vicinity. Additional police surveillance near recreation areas, parking zones, and the Metro station will become increasingly important for residents and Metro users.

The issue of community facilities/public services is discussed under the Community Services and Facilities Elements. Policies 7 and 9 lend pertinent direction.



The Twinbrook-Neighborhood Planning Advisory Group has identified the following goal, objectives, and policies in an attempt to define more clearly where Twinbrook would like to be during this period when Metrorail service will become a reality.

Goal

The Twinbrook Neighborhood should be a "community" characterized by high quality living space and excellence in provision of community services and facilities, public and private, at a scale appropriate for maintaining and enhancing the present integrity of the neighborhood.

Objectives

The neighborhood plan states that the City of Rockville should adopt an amendment to the Master Plan that would work to preserve and enhance the defined neighborhood by: (1) sustaining the existing residential character, (principally single family, owner-occupied detached housing), through continuation of high standards for maintaining and enhancing housing and community facilities; (2) denying external attempts of encroachment;* (3) continuing to seek direction from the neighborhood on issues affecting its future; and, (4) encouraging safe circulation for pedestrians and vehicles.

The goal and objectives broadly convey the ultimate recognition of what the neighborhood should be and then describe general means by which this can be attained as a result of twelve months of open planning and careful factfinding efforts. The following policies attempt to give additional guidance on how to achieve the objective and specify current

*'Encroachment' - zoning changes which would impact the character of the neighborhood.

and potential problems in response to the issues discussed in the previous section.

Policies

To clarify the intent of the Twinbrook Neighborhood and assist policy makers in making decisions, the following policies are proposed:

1. Protect Twinbrook and its environs from commercial, industrial, or incompatible residential encroachment.
2. In new construction or redevelopment, emphasize high quality development and excellence in facade appearance in all private or public projects within or adjacent to the Twinbrook neighborhood.
3. In existing housing, retail and industrial buildings, encourage exterior facade and landscaping maintenance by all owners within the Twinbrook community and environs.
4. Implement alternative transit options (pedestrian, bikeway, and "minibus") as part of all new circulation planning.
5. Modify circulation patterns to reduce traffic impacts detrimental to safety, environment, and character of the residential area.
6. Emphasize maintenance of ambient noise levels at existing or lower volumes.
7. Insure maintenance and enhancement of all public facilities for the betterment of the community.
8. Establish a regular meeting with the Planning Commission for planning liaison on issues affecting the Twinbrook area.
9. Provide the Twinbrook Neighborhood Planning Area with the best possible community services within the neighborhood boundaries and throughout the City.

LAND USE AND ZONING ELEMENT

LAND USE AND ZONING IN TWINBROOK

INTRODUCTION

The land use component of the plan is composed of three basic elements: residential, commercial, and industrial. Residential land use is dominant within the Twinbrook area, followed by service industrial and retail commercial. The land use section will be followed by a discussion on housing which is significantly impacted by the overall quality of the environment in the Twinbrook community.

POLICIES

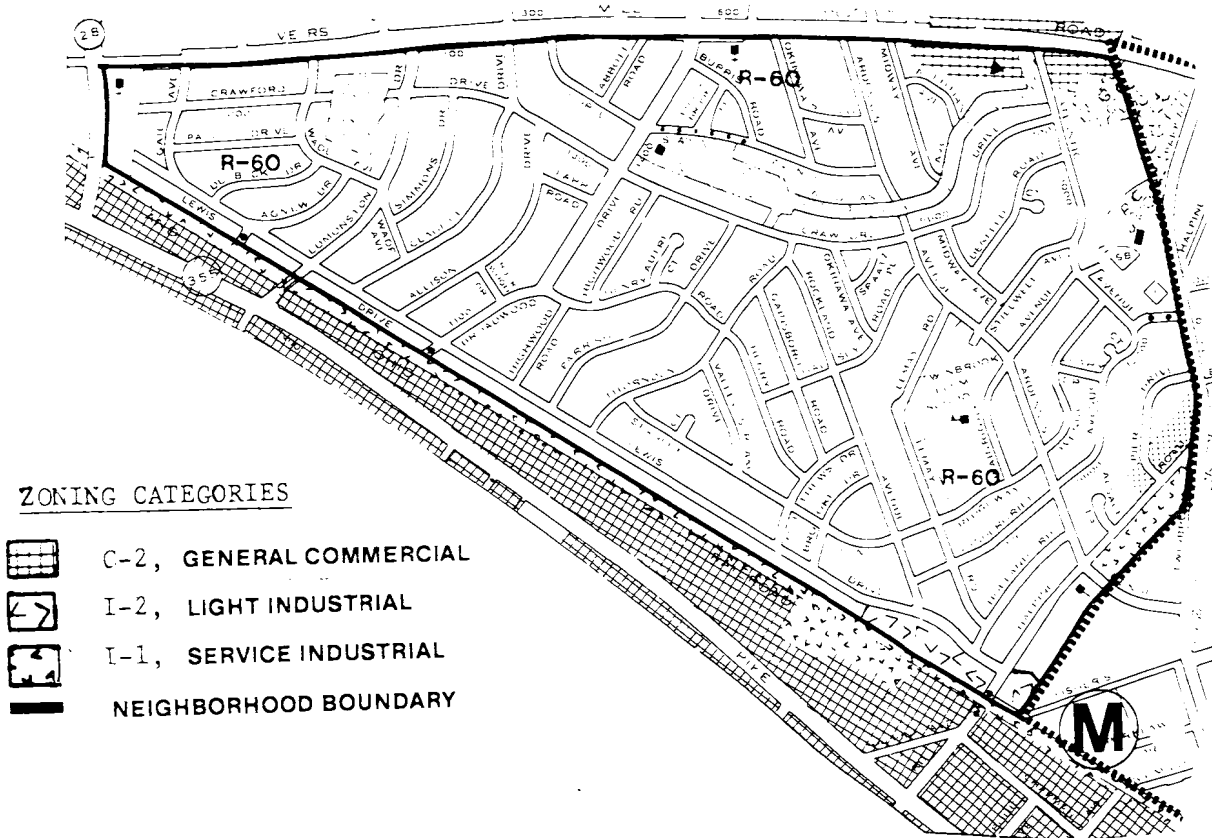
1. Protect Twinbrook and its environs from commercial, industrial or incompatible residential encroachment.
2. In new construction or redevelopment, emphasize high quality development and excellence in facade appearance in all private or public projects within or adjacent to the Twinbrook Neighborhood.
3. In existing housing, retail and industrial buildings, encourage exterior facade and landscaping maintenance by all owners within the Twinbrook community and environs.

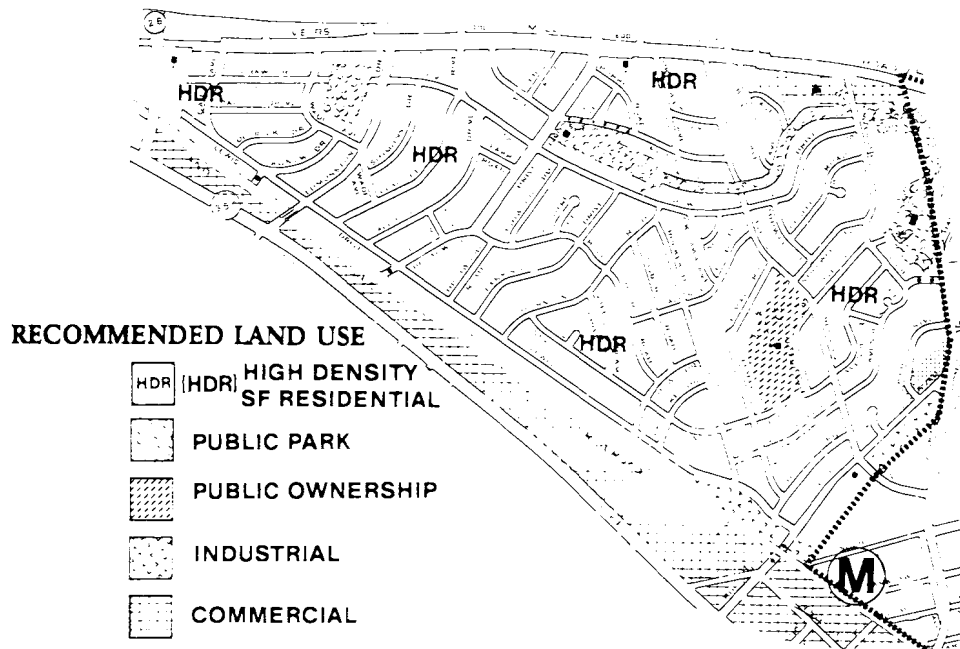
EXISTING ZONING

Current Zoning and Land Use in Twinbrook Neighborhood

<u>USE</u>	<u>ACRES</u>	<u>ZONING</u>	<u>%TOTAL ACRES</u>
RESIDENTIAL	450.5	R-60	95.30%
VACANT	4.0	R-60	.90%
INDUSTRIAL	4.8	I-2	1.00%
VACANT	1.7	I-2	.40%
VACANT	6.0	I-1	1.30%
<u>COMMERCIAL</u>	<u>5.6</u>	C-1	<u>1.20%</u>
TOTALS	472.6		100.1%

ZONING MAP





RESIDENTIAL LAND USE

Housing development within the Twinbrook Neighborhood area is nearly complete, except for the tract adjacent to the Rockcrest Subdivision to be discussed in the housing section.² As housing grows older and families change in size, renovation and major improvements are occurring. Twinbrook is a vital, stable residential community of 1,799 single-family detached units. Therefore, the focus of this element within the plan is preserving and enhancing the existing single-family character of the neighborhood (primarily owner occupied units).

This situation puts Twinbrook in a unique situation relative to other areas adjacent to Metrorail stations within the Washington Metropolitan Area. As was noted in the newly released Housing Policy for Montgomery County, Maryland report, commercial uses have higher land value and produce greater returns, than comparable residential land

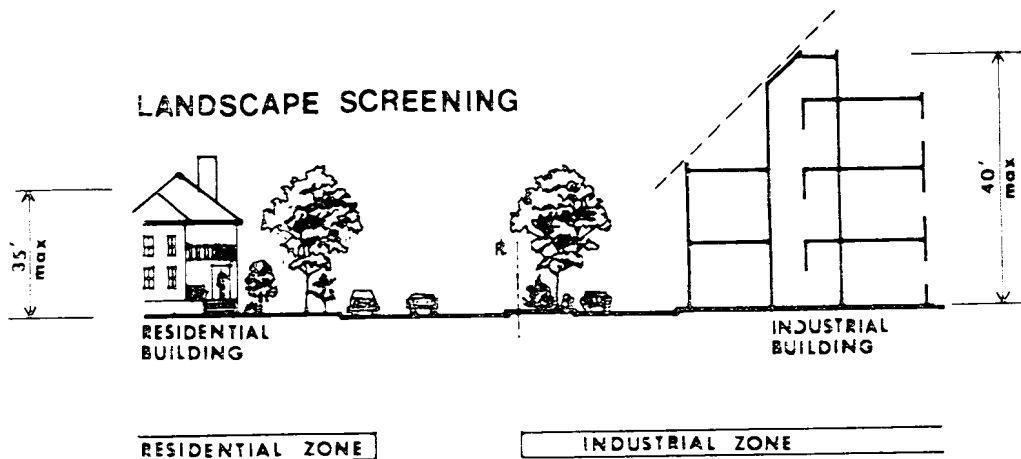
²Property located at First Street extension.

uses.³ Uses other than housing have generally been promoted immediately around Metro facilities, as a result. The City of Rockville has an opportunity to change this trend and promote more efficient use of Metro by insuring a stable housing stock close to Metrorail stations. The Twinbrook Neighborhood offers a traditional single family neighborhood with the added convenience of Metrorail. This in turn, permits easy access by commuting residents in the neighborhood, increased job opportunities for those in the community, and relief for some transportation problems. This plan endorses preservation of the existing housing stock and additional development which does not intensify land use within or immediately adjacent to the neighborhood boundaries.

INDUSTRIAL LAND USE

The Twinbrook Neighborhood includes a 4.82 acre I-2 light industrial area which has twenty-five business establishments. (This does not include the old Suburban Propane site at the intersection of Halpine Road and Lewis Avenue). It is fully developed at this time, with the exception of the old Suburban Propane site which is currently owned by Metro. Existing buildings are fairly attractive and at an appropriate height for being adjacent to a residential area. The primary consideration is to maintain or enhance the industrial area to be more compatible with the adjacent residential use.

Additional screening to provide a suitable visual break within the public right-of-way or on existing properties would enhance the environment. This is especially important in front of parking lots to hide large numbers of vehicles. To further improve appearances, vehicles, other than automobiles, should be required to park on-site as opposed to on the street. Improved appearance at the intersection



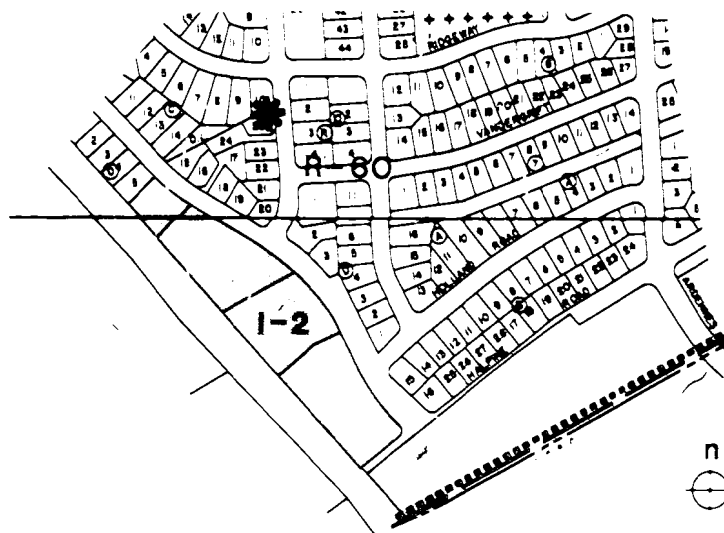
³Housing Policy for Montgomery County, Maryland, Executive's Recommended Draft, Department of Housing and Community Development, June 1980.

of Lewis Avenue and Halpine Road is most important due to its high visibility as the primary entrance to the industrial area.

The last expansion within this industrial park was in 1969, with the addition of McCormick Paint. No further expansion of the existing area is possible along Lewis Avenue. However, if Metro disposes of the Suburban Propane site on Halpine Road, this area (1.72 acres) could allow approximately 28,600 square feet of I-2 industrial space. The recommendations for screening at redevelopment and encouraging existing operations to perform additional landscaping are shown in the previous line drawing. The City should be prepared to improve portions of the public right-of-way where appropriate.

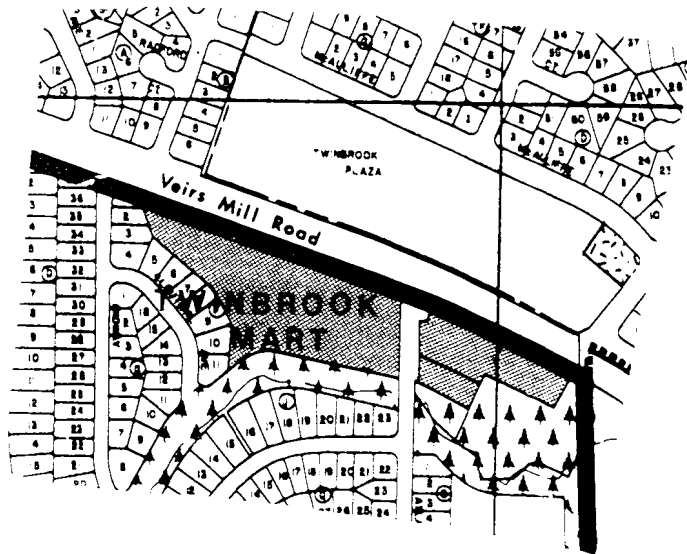
It is recommended that the light industrial zone as it exists at this time, not be permitted to expand in size or height. The only exception is the old Suburban Propane site which should only be developed at a scale and character in balance with the rest of the industrial park. Particular consideration for landscaping near immediately adjacent residences is important so no encroachment will occur.

Lewis Ave. Industrial Park



COMMERCIAL LAND USE

The Twinbrook Neighborhood includes a small retail shopping area called the "Twinbrook Mart" with 3.9 acres and fifteen shops. The major tenant is the United States Postal Service with 40,000 square feet of space. This neighborhood convenience commercial center has suffered high turnover of tenants, but rarely seems vacant. According to local residents, the area appears to have stabilized between 1978-1980. The Twinbrook Mart and the Twinbrook Plaza Shopping Center substantially serve residents within the study area by providing basic necessities such as gas, food, hardware, barbers, banking and dining. No expansion of these facilities is anticipated nor recommended. However, the existing scale and character should be maintained and general appearance enhanced.



Owners of the Twinbrook Mart should be encouraged to improve the facade appearance as soon as feasible. Tenants and owners alike should encourage consumers to be neat through provision of convenient trash receptacles. Special attention to keeping areas surrounding the shopping centers clean is important to maintaining good community relations.

The convenient shopping areas currently in operation are generally acceptable to residents although more service commercial would be preferred in the Twinbrook Mart Shopping area. However, if safer crossing of Veirs Mill Road can be effected, then this would aid both centers by encouraging additional pedestrian traffic as more people attempt to avoid using their cars.

No new commercial areas should be permitted in or adjacent to the Twinbrook Neighborhood. No "spot" or "non-conforming" commercial uses should be contemplated outside existing commercial establishments.

Housing

1. Maintain density at existing R-60 levels.
2. Limit future housing development to a single parcel (Moran Tract), northwest of Rockcrest.
3. Correct City land use plan to change "Lewis Avenue Triangle" from I-2 to R-60 zoning.

4. Continue to offer programs which will encourage home improvement, such as the Free Paint Program and low cost loans and/or grants for home maintenance especially to owner occupants.
5. Maximize code enforcement in particular for licensing of rental units. Consider reducing the number of unrelated individuals who may rent a unit together.

Industrial

1. Maintain current scale and density as permitted under the I-2, Service Industrial zone. Eliminate all special exception uses, allowing permitted uses only.
2. Limit industrial development to its current land area so that encroachment into residential areas is not a problem.
3. Encourage service industrial traffic to use Halpine Road and lower Lewis Avenue exclusively.

Commercial

1. Maintain current scale and density of commercial establishments as permitted under the C-1, Convenience Commercial zone.
2. Limit commercial development to its current land area not permitting expansion anywhere in the Twinbrook Neighborhood.

HOUSING

HOUSING IN TWINBROOK

INTRODUCTION

The Housing Element of the Twinbrook Neighborhood Plan is separated under its own chapter due to the significant portion of the planning area devoted exclusively to residential use. The housing stock* in this area is considered a primary resource of the neighborhood by residents. This section discusses changing values within the area and the importance of Twinbrook housing prices relative to other locations within the City and County. The relationship of investment properties with owner occupied units is discussed.

POLICIES

1. Protect Twinbrook and its environs from commercial, industrial or incompatible residential encroachment.
2. In new construction or redevelopment, emphasize high quality development and excellence in facade appearance in all private or public projects within or adjacent to the Twinbrook Neighborhood.
3. In existing housing, retail and industrial buildings, encourage exterior facade and landscaping maintenance by all owners within the Twinbrook community and environs.

EXISTING CONDITIONS

Current zoning throughout the Twinbrook Neighborhood is fixed at R-60 single-family detached at a density of seven units per acre. No change in zoning is recommended for this area. The units which were constructed between the 1940s (Rockcrest subdivision) and the early 1960s (Halpine Village) are relatively small and are ideally suited for new young families or couples with grown children. The price of housing in the area is more reasonable than most areas in the City or anywhere in the County. This makes Twinbrook very attractive to both new and old homeowners. It should be noted that this is also likely to be an attractive area for investment purposes as well. Housing values are approximately seventy percent of the City-wide average and sixty percent of the County-wide average in 1979.

*"Housing Stock" - term describes all housing available in a given area without describing condition, style or type.

TABLE 1

AVERAGE SALES VALUE⁴

<u>DATE</u>	<u>TWINBROOK</u>	<u>ROCKVILLE</u>	<u>MONTGOMERY COUNTY</u>
1979	\$56,137	\$79,900	\$93,615

Considering the neighborhood as a whole, the average annual sales price in 1969 was \$20,500. Eleven years later, the same unit would sell for \$56,000 or an increase of 173% in value. This compares with a City-wide increase of 224% over the same period. The average increase of 15.7% annually since 1970 makes housing in this area an excellent investment for both homeowner and investor.

TABLE 2

AVERAGE ANNUAL SALES PRICE BY SUBDIVISION⁵

<u>YEAR</u>	<u>NEIGHBORHOOD AVERAGE</u>	<u>ROCKCREST</u>	<u>ROCKLAND</u>	<u>TWINBROOK</u>	<u>HALPINE VILLAGE</u>
1969	\$20,500	\$18,453	\$20,722	\$19,850	\$27,667
1970	21,113	20,450	21,800	21,604	-
1971	23,335	22,380	27,613	23,105	30,025
1972	28,928	25,369	29,704	25,624	39,000
1973	31,604	31,220	32,880	31,603	40,767
1974	27,095	29,980	29,392	35,782	59,334
1975	33,245	34,250	42,114	43,544	41,167
1976	42,800	40,100	46,326	47,774	52,575
1977	43,685	42,494	43,054	43,544	62,750
1978	47,926	46,692	47,828	47,774	44,000
1979	56,137	53,591	60,678	56,315	62,214

⁴ Annual Residential Development Report, Summery 1979, Maryland National Capital Parks and Planning Commission, March 1980, p.14.

⁵ Lusk Real Estate Reports, Courtesy Montgomery County Board of Realtors, 1969-1980.

According to the Annual Residential Development Report - 1979, an information report, which monitors and analyzes residential development trends in Montgomery County, the median sales price of a used home in the City of Rockville was \$83,000⁶. This figure applies to used homes only and compares with the County-wide median of \$79,000. This shows that the median cost for the Twinbrook Neighborhood, of \$56,000 is still less than the City as a whole, making the Twinbrook Neighborhood a very attractive alternative for young families and empty-nesters. Empty-nesters are those families where all the children have left home, and only the parents remain.

Despite the lower cost, housing in Twinbrook is becoming increasingly costly, making it difficult for persons with modest incomes to purchase or maintain existing units. Programs such as the Community Enhancement Program, Free Paint Program and others should be continued in order to stimulate maintenance and improvement of the neighborhood. These types of programs encourage families to stay in the Twinbrook Neighborhood, increasing stability within the neighborhood and stabilizing housing value increases. However, stable prices seem unlikely to occur until after Metrorail service begins in late 1983. Metro does not appear to be the cause of existing increases, but does appear to be a contributing factor. Therefore, at each resale, the moderate priced housing unit can be expected to become a diminishing commodity due to current market conditions. The average turnover rate since 1969 in the Twinbrook Neighborhood was a substantial 6.6% per annum. Three of the past four years have turnover rates in excess of 9% for the Twinbrook Neighborhood.⁷

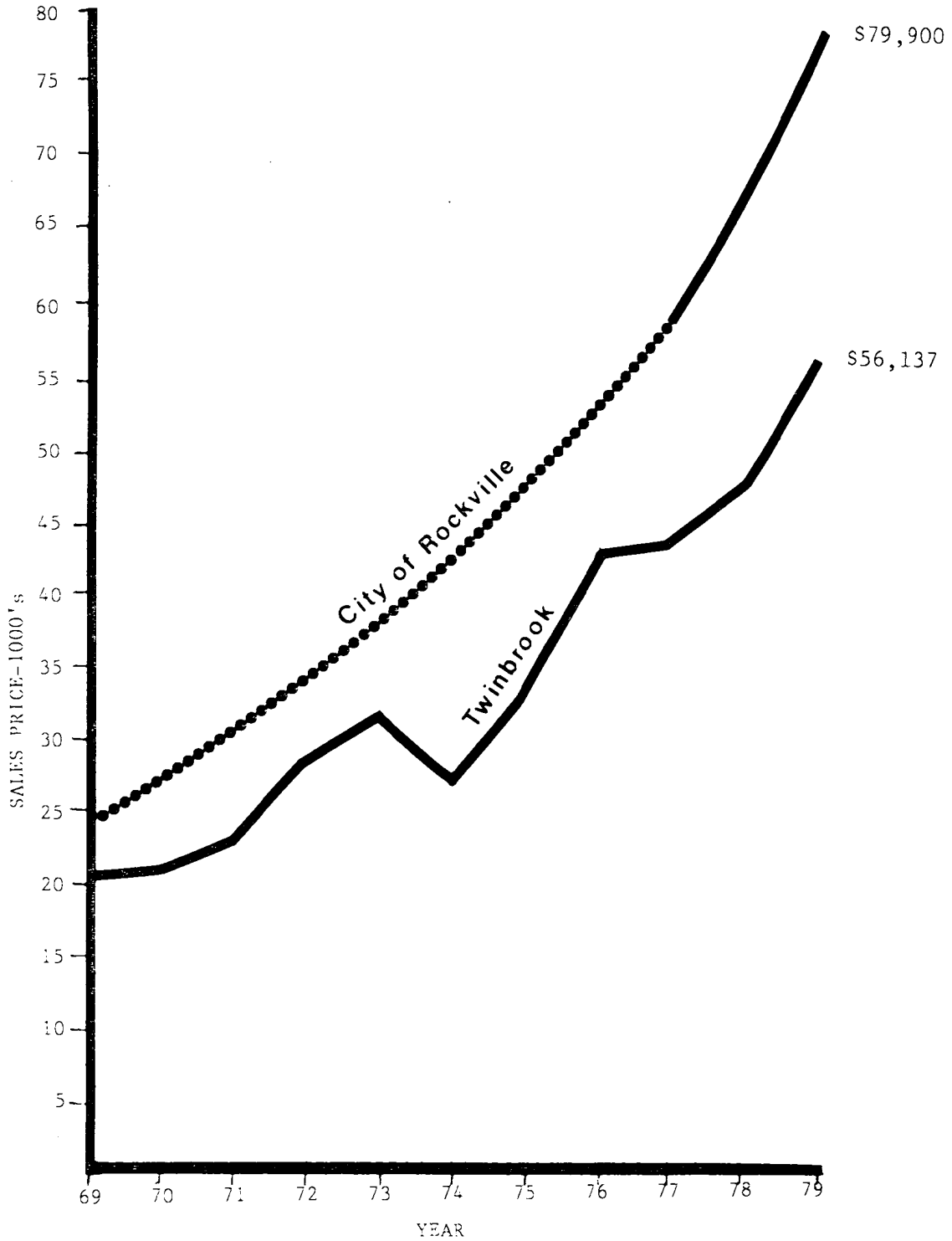
Fear of speculation is a major neighborhood concern. One indicator of this type of investment is an increase in the number of renters in a given area. Sales in areas where speculation is occurring tend to be more frequent since there is no long-term commitment to the property. Frequent turnover tends to drive up property values in areas like Twinbrook. Investors have probably contributed to the higher than average annual increase in housing values.

⁶Annual Residential Development Report, Summary 1979, Maryland National Capital Parks and Planning Commission, March 1980, p.14.

⁷Turnover rate is calculated by dividing the number of units sold by the total number of units within the study area.

FIGURE 1

**AVERAGE ANNUAL HOUSING SALE PRICES
IN TWINBROOK NEIGHBORHOOD***

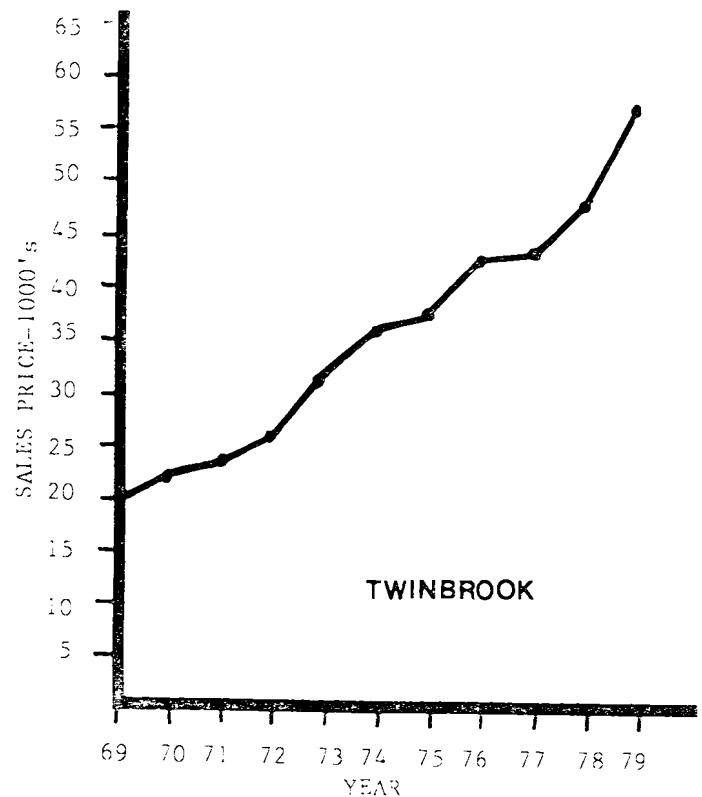
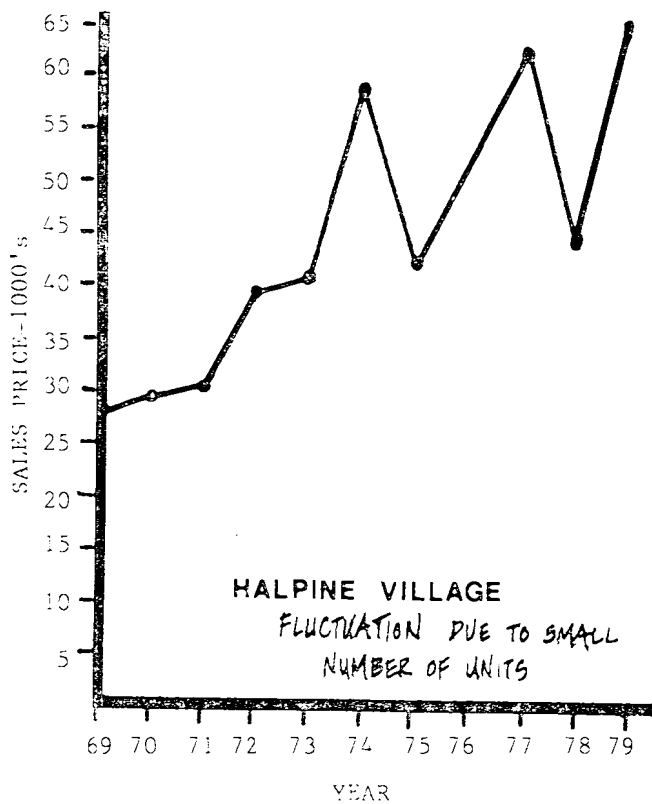
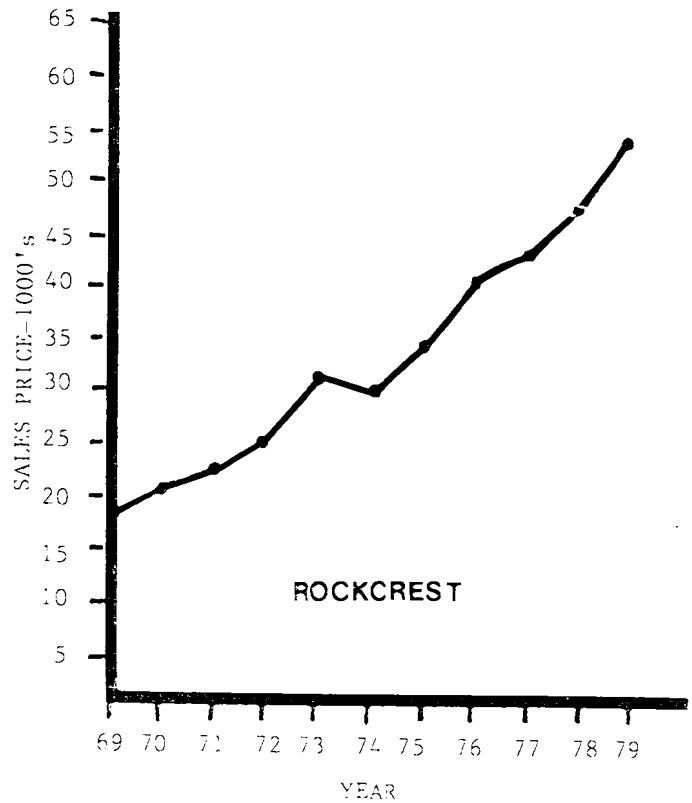
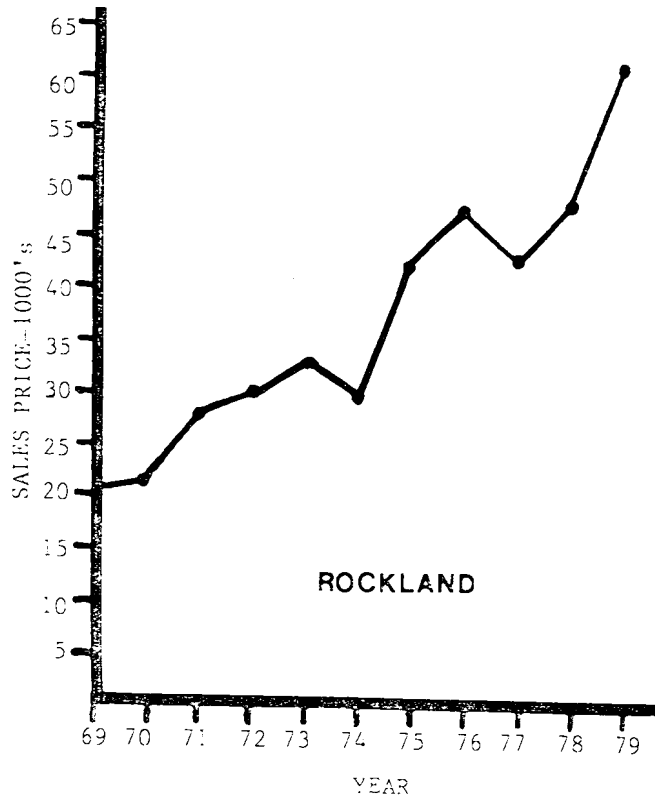


*Lusk Real Estate Reports, Courtesy of Montgomery County Board of Realtors, 1969-1980.

FIGURE 2

-2/-

AVERAGE ANNUAL HOUSING SALE PRICES IN TWINBROOK NEIGHBORHOOD BY SUBDIVISION *



*Lusk Real Estate Reports. Courtesy Montgomery County Board of Realtors

TABLE 3

RENTALS BY SUBDIVISION - JUNE 1980⁸

<u>SUBDIVISION</u>	<u>TOTAL # UNITS</u>	<u>% OF TOTAL</u>	<u># RENTAL</u>	<u>BY NEIGHBORHOOD</u>	<u>BY SUBDIVISION</u>
Rockcrest	788	43.8%	95	44.0%	12.06%
Rockland	331	18.4%	23	10.7%	6.15%
Twinbrook	584	32.5%	93	43.1%	15.92%
Halpine Village	<u>95</u>	<u>5.3%</u>	<u>5</u>	<u>2.3%</u>	<u>5.26%</u>
Total	1799	100.0%	216	100.10%	12.01%

The oldest housing in the neighborhood is located in Rockcrest; it also has the largest number of renters. However, this area is where the majority of housing units are located making this percentage less than significant. The Twinbrook subdivision on the other hand, has 16% of all rental units, but only 33% of the housing units. Rockland and Halpine Village have small numbers of rental housing units indicating high stability and in the case of Halpine Village, a somewhat newer housing stock.

The City Department of Licenses and Inspection is not certain that all units currently being rented are licensed. However, it would appear that the Rental license program reflects an accurate trend for the Twinbrook Neighborhood and is likely to be correct for this area. Stronger enforcement of rental licensing laws may result in additional rental units being recognized.

MODERATE COST HOUSING

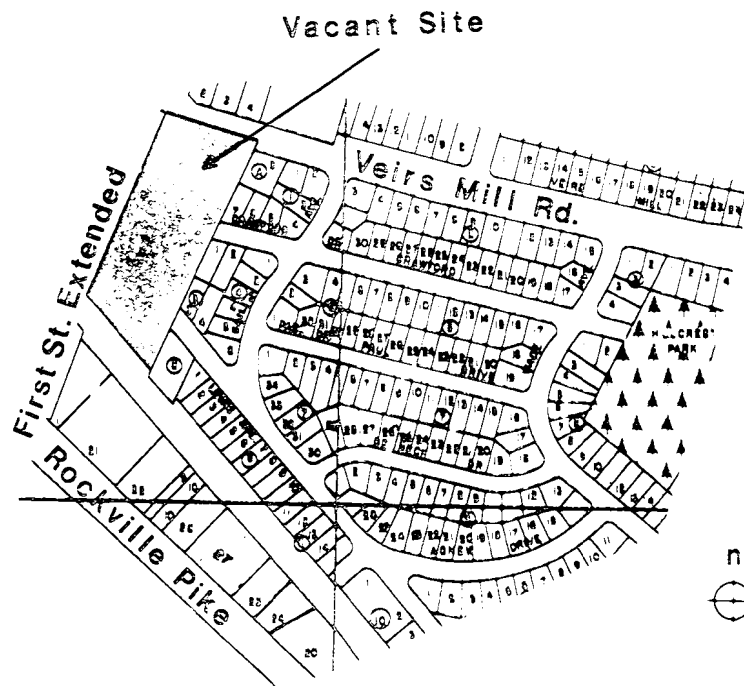
Preservation of the existing housing supply is a vital element of the Twinbrook Neighborhood Plan. Residents recognize a need for strong code enforcement to encourage maintenance of homes in the area. Home-owners consider this especially important in regards to rental units where lack of vested interest on the part of the renter sometimes results in little or no maintenance.

The comparatively modest cost of housing in the Twinbrook neighborhood relative to other parts of the City and County makes this area a major resource in the City. However, due to the coming of Metro the price

⁸Data developed from City of Rockville Rental Licensing Files, June, 1980. (Licenses and Inspection).

and type of householders is likely to change over the next five years. Increasing numbers of young professional families are likely to locate in this area. Stability of the neighborhood may increase as current landlords sell properties held for speculation to owner occupants to avoid new assessments due in 1983.

No new housing is expected to be developed in the Twinbrook area at this time with one exception. The residential development of a single parcel at the northern tip of Rockcrest is possible. With the extension of First Street bordering the far edge of the property, a definitive boundary will be established along the final northwest perimeter. The land is currently zoned R-60, (residential) and should be developed in a compatible manner, not to exceed 10 units per acre. Approximately 24 units could be built on this property at traditional R-60 density. Special care should be taken to keep as many trees on the property as possible. The protection of the entire neighborhood rests on limiting access to this site from within the existing neighborhood as well as erecting an earth berm to reduce noise between the planned First Street extension and Veirs Mill Road improvement.



The Twinbrook Neighborhood will continue to offer a supply of housing at an affordable cost, reasonable size and rational neighborhood scale for small families.

RECOMMENDATIONS

1. Preserve and enhance the existing single family housing stock.
2. Establish or expand programs for the improvement or rehabilitation of all housing within the Twinbrook Neighborhood and the City as personnel or funds become available.
3. Encourage homeowners to maintain their own units.
4. Encourage energy conservation by all property owners whether they own residential, commercial or industrial properties.
5. After study of the Croydon Park and Twinbrook neighborhoods, it is recommended that the City develop a formal City-wide housing policy.

CIRCULATION

CIRCULATION IN TWINBROOK

INTRODUCTION

As an older substantially developed area, the Twinbrook Neighborhood has an established circulation system. The function of this element within the plan is to evaluate the existing system and present alternatives to make it work more safely and efficiently.

The introduction of the Metrorail system brings a new factor into the Twinbrook transportation matrix. Other forms of "alternative transportation" are being seriously considered by the commuting public. Making options more attractive, convenient and available is strongly recommended by this plan.

There are five primary components in any complete circulation plan. These are streets, bikeways, pedestrian ways, mass transit and parking management. The appropriate combination of these components results in a balanced circulation system. Currently, circulation in the Twinbrook Neighborhood is automobile oriented with limited bike and pedestrian ways through the parks. Emphasis on linking bike and pedestrian ways, provision of convenient mass transit (both bus and rail) and a comprehensive parking management policy, are the components to be addressed in this document. In order to evaluate alternatives more effectively, six guidelines were established by area residents as being consequential.

POLICIES

4. Implement alternative transit options (pedestrian, bikeway and "minibus") as part of all new circulation planning.
5. Modify circulation patterns to reduce traffic impacts detrimental to safety, environment, and character of the residential area.
6. Emphasize the maintenance of ambient noise levels at existing or lower volumes.



1980 Universal Press Syndicate

GUIDELINES

1. Circulation patterns should reinforce the stability of the Twinbrook Neighborhood.
2. All components of the internal circulation system should encourage the use of a balanced transportation system. (Provide options to automotive travel.)
3. Transit related noise and air pollution should be limited to existing or lower levels.
4. Roads should be the minimum size which will permit free traffic flow, and still meet appropriate road standards.
5. Through traffic should be separated from local traffic at every opportunity.
6. Adequate on-street parking for residents should be ensured where off-street parking is not available.

These general guidelines should be considered along with safety and engineering concerns when evaluating changes in circulation.

STREETS

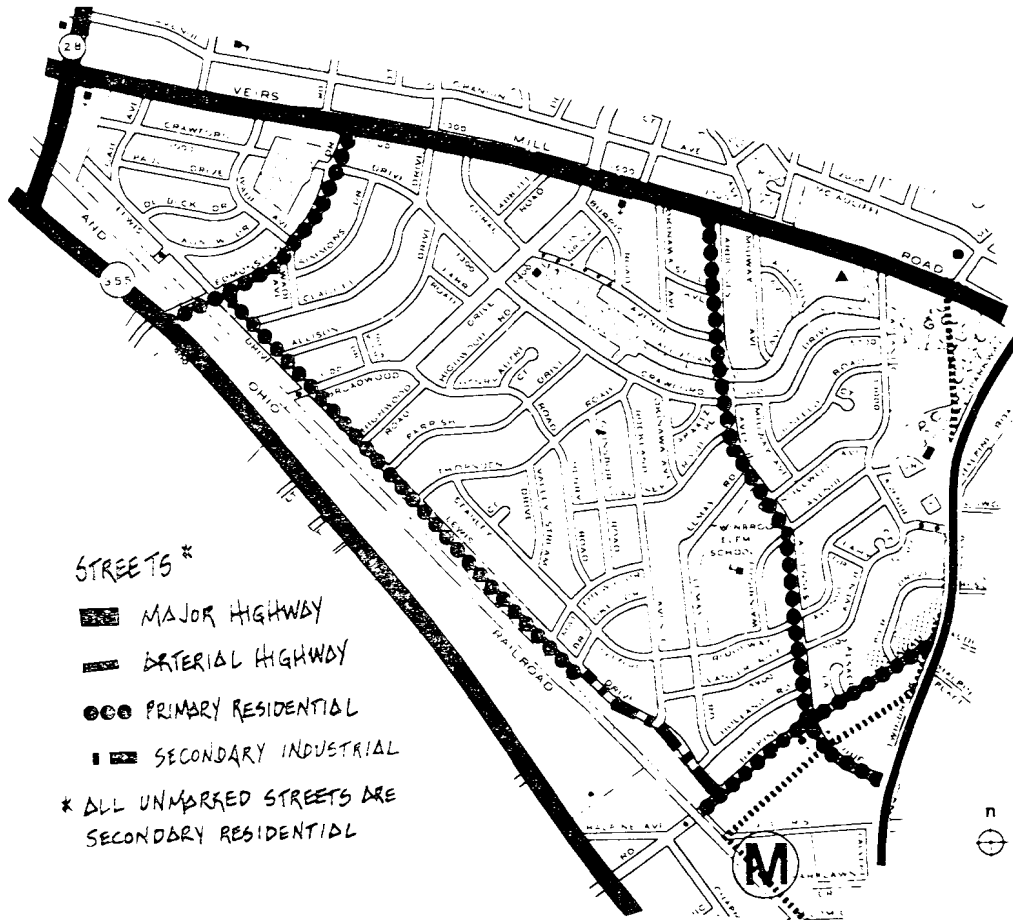
External Street System

The Twinbrook Neighborhood is surrounded by some of the most heavily used roadways in Montgomery County. Veirs Mill Road and Rockville Pike are classified as major highways and had average daily traffic counts of 37,000 and 42,000 vehicles respectively in the Twinbrook vicinity during 1979. The First Street Extension or Route 28 (east) to be completed by July 1982, will also be classed as a major highway. Twinbrook Parkway which borders the planning area on the east is classed as an arterial highway. The term arterial highway identifies it as a connector between two major highways.

The importance of these highways is significant in complying with the suggested guidelines. These roadways reinforce the boundaries of the defined Twinbrook Neighborhood, and a strong boundary supports community stability. Major highways also provide adequate access for neighborhood residents and should have sufficient capacity to handle all non-neighborhood traffic. Therefore, no additional traffic beyond resident traffic should need to pass-through the Twinbrook Neighborhood. Solutions should be proposed to improve the intended function.

Internal Street System

The internal circulation patterns of a neighborhood should be compatible with the scale and character of the neighborhood. Streets by their size, type and traffic volume play an important role in reinforcing the stability of an area. The effect of these three factors can either unify a neighborhood or separate one area from another.



Streets of residential neighborhoods, such as Twinbrook were planned and designed for local neighborhood traffic circulation. Non-resident navigation through neighborhoods attempting to reduce travel time, or for parking, may overload local streets by raising traffic volume, increasing likelihood for pedestrian and vehicle conflict, and cause additional noise and air pollution. Neighborhood residents should not be exposed to these difficulties.

Primary roads are those streets serving as collectors from smaller secondary roads to arterials and majors. There are four primary residential roads within the Twinbrook Neighborhood. These are Edmonston Drive, Ardennes Avenue, Halpine Road and Lewis Avenue. The lower portion of Lewis Avenue between Brooke Drive and Halpine Road is considered a secondary industrial street. All other streets are secondary residential. During the Period when the subdivisions in Twinbrook were developed, families tended to own fewer automobiles than are now common. The streets were designed for fewer cars, tend to be narrow and have few driveways. The pressure of pass-through traffic in the neighborhood is disruptive along confined roads.

TABLE 1

<u>STREET</u>	<u>CLASSIFICATION</u>	<u>LOCATION</u>
Ardennes Avenue	Primary Residential	Twinbrook to Veirs Mill
Edmonston Drive	Primary Residential	Rockville Pike to Veirs Mill
Halpine Road	Primary Residential	Lewis Avenue to Twinbrook
Lewis Avenue	Primary Residential	Edmonston Drive to Brooke Drive
Lewis Avenue	Secondary Industrial	Brook Drive to Halpine

Edmonston Drive was originally constructed to primary residential street width standards which offer easy connection between two major highways (see Table 1). It has been temporarily underutilized since Edmonston bridge was temporarily closed for Metro construction. The bridge itself offers improved road width and safer pedestrian walkways than the old bridge. While this will allow an even greater volume of traffic onto Edmonston Drive to pass-through the neighborhood, the First Street extension is expected to relieve this pressure once it is completed in summer 1982. Temporarily, a "no right turn" sign at Lewis Avenue may be necessary to control morning rush hour pass-through traffic from Rockville Pike.

The grade of the new bridge will remain poor for truck crossing. Truck traffic must be strictly denied access at this point; otherwise upper Lewis Avenue could become an access point to the Industrial Park at the lower end of Lewis Avenue. Fortunately, emergency vehicles will now be allowed ingress and egress at the new Edmonston bridge due to the improved design.

Ardennes Avenue also acts as a direct link between a major highway and an arterial road, specifically Veirs Mill Road and Twinbrook Parkway. Unfortunately, this street is of variable width and winds past some important pedestrian crossing points. Unlike Edmonston Drive, Ardennes Avenue has a traffic light only at Twinbrook Parkway. This is a difficult access point. When Metrorail service opens, Ardennes will become more than a simple pass-through road. It will become a connector to the Metrorail Station itself by acting as a conduit for Metro users north of Veirs Mill Road. Traffic along Ardennes is already cause for some alarm, due to the narrowness of the roadway, on-street parking, and proximity of the elementary school.

In addition to the homes affected by pass-through traffic along Ardennes Avenue, two public areas are impacted. These are Twinbrook Elementary School at Wainwright Avenue and Ardennes Avenue and the Rockcrest Park bikeway/walkway. These facilities experience their greatest traffic conflict during morning rush hour between 8:00-9:00 A.M. Evening rush hour is unlikely to impact the elementary school and has less impact due to the longer rush hour period. Resolving the problems presented by morning rush hour becomes the most serious and complex issue. Additionally, the number of crossing guards in this vicinity is planned to be reduced by the Montgomery County Board of Education.

Several alternatives were explored to resolve the difficulty presented by heavy traffic on Ardennes Avenue which divides a residential area. Adopted proposals would only be implemented when Metro service begins.

The first option would be to deny right turns from Veirs Mill Road onto Ardennes Avenue during morning rush hour. This is difficult to enforce due to the Veirs Mill service road, but would be easy to implement. To allow easier traffic flow along Ardennes, "no parking signs" could be erected to deny parking from 8:00 A.M. to 5:00 P.M. on weekdays. This would not solve the problem of vehicle/pedestrian conflicts, but would allow smoother traffic flow enabling more cars to pass-through. However, residents on Ardennes would be inconvenienced if they did not have adequate parking spaces or driveways in their yards. Finally, Ardennes Avenue could be closed below Halpine Road. This would effectively restrict non-neighborhood traffic from the street. Closure of Ardennes Avenue is not acceptable to the neighborhood residents as a viable alternative, despite the fact that it would be a most effective solution.

Halpine Road was designated as a primary residential street in the 1970 City Master Plan. Halpine is substandard for a primary residential street between Lewis Avenue and Ardennes Avenue. The street is narrow and lacks curbing in some sections. This is a critical connection now that it is the only linkage out of the neighborhood for the Industrial Park traffic. Therefore, the roadway should be an even width of 26 feet overall and improved with curb and gutter on the south side of Halpine Road.

Lewis Avenue is designated primary residential from Edmonston Drive to Brooke Avenue and this plan designates the section from Brooke Drive to Halpine Road as primary industrial. Lewis Avenue is an adequate width and is very straight from Edmonston to Halpine. Although the road design is appropriate, it has become a drag strip for local youth. Furthermore, in addition to acting as a neighborhood traffic collector, this street could act as a corridor from Rockville Pike to Twinbrook Parkway once the Edmonston bridge is reopened. This through traffic may increase when Metrorail rail service begins.

Several options were considered to maintain a high quality street environment and reduce potential pedestrian/vehicle conflicts. First, no right turn from Edmonston Drive could be permitted during morning rush hours. This would restrict Lewis Avenue to use by neighborhood residents only during the heaviest traffic period while only affecting non-residents or night-shift workers returning home between 7:00-9:00 A.M., for example. Second, speed bumps were proposed as a potential solution to speeding along Lewis Avenue by area youth. However, speed bumps would affect emergency vehicles and tend to mitigate Lewis Avenue's usefulness as a neighborhood collector.* Furthermore, a recent study by San Jose, California, indicated that speed bumps were not effective in reducing vehicle speeds.** A diverter was considered at Parrish Drive to require traffic to go around one block, thus controlling speeding. This solution was good for emergency vehicles, but also tends to mitigate Lewis Avenue's use as a collector. Additional alternatives should be explored.

The major issue to be considered when discussing the internal circulation system is separation of neighborhood traffic from through traffic. Another important factor is how great a commitment or sacrifice neighborhood residents are willing to make to achieve this separation of traffic types. Most residents agree that separation is good, however, few appear willing to undergo any inconvenience unless they are directly affected.

PARKING

Narrow streets in the Twinbrook Neighborhood combined with through traffic and a general shortage of driveways complicate parking for neighborhood residents. Non-resident parking on residential streets by commuters has become enough of a problem to cause development of a permit parking ordinance. Permit parking is requested by local residents on a block by block basis.) (See Appendix 4).

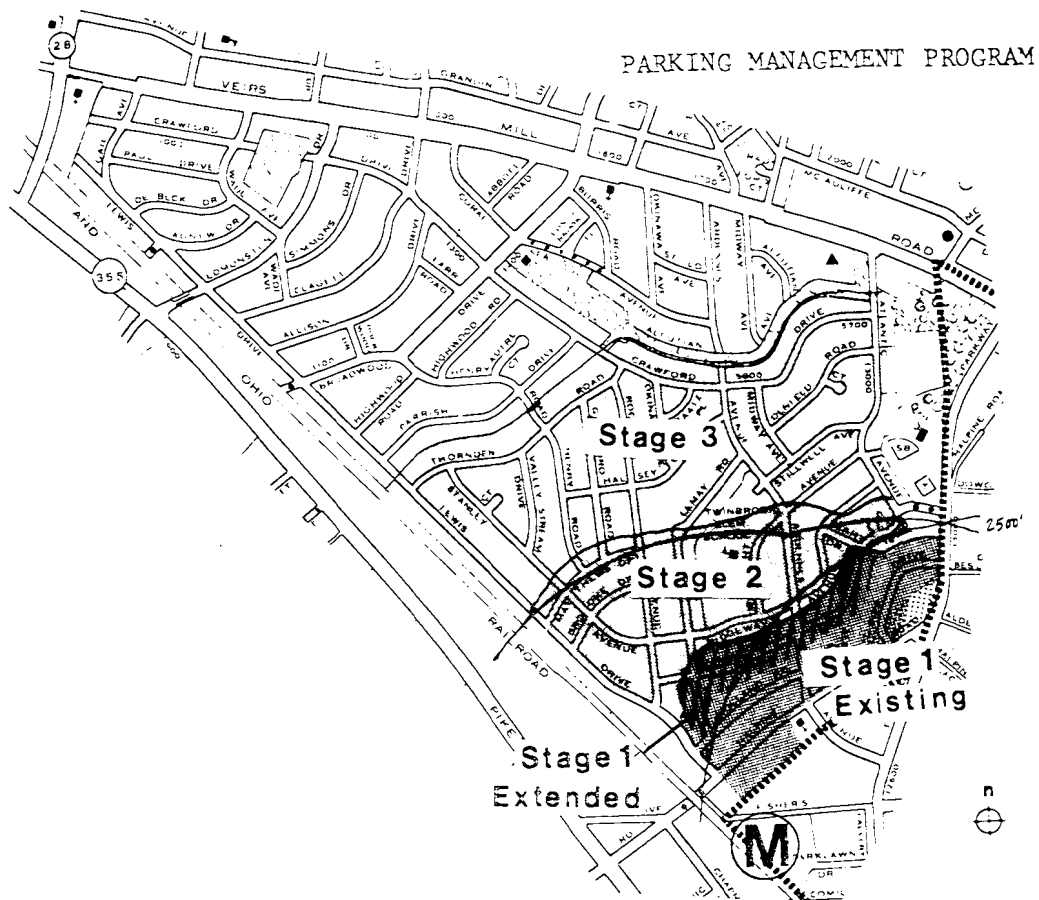
*A "collector street" is one which adjacent secondary streets empty into.

**Residential Traffic Control in the United States, Ronald Welke, Management Information Service Report, Volume 12, Number 5, May 1980.

The opening of the Metrorail Station will affect the neighborhood in many ways. The current case involves commuters choosing residential streets instead of the HHS Parklawn Building parking lot in order to save parking fees. The Metro Station will bring additional commuters who will choose free residential parking instead of paying Metro parking fees. It will be necessary to make parking fees more attractive than parking tickets. This will place the burden of enforcement on the City Police Department.

As the Parklawn area becomes more intensely developed, additional pressure will occur to satisfy parking needs. The Metrorail facility will help reduce some parking pressures from commuters coming from Washington, D. C. However, experience around other rapid transit stations shows that new parking pressure is introduced with the commencement of transit service. If one site parking facilities are costly or inadequate to service the number of users, then commuters will seek some other location for parking. The most convenient and accessible quarter includes the Twinbrook residential and industrial areas.

Map 2 shows three different arcs at a distance of 2500 feet from existing major employers and the future Metro Station. The existing permit parking district was established in Spring, 1980 and falls within the arc surrounding the Federal Department of Health and Human Services (HHS, formerly HEW). The parking problem addressed fell exactly within this artificially created limit. This lends credence to the use of a 2500 foot "reasonable walking distance" standard as applicable to the Rockville situation.



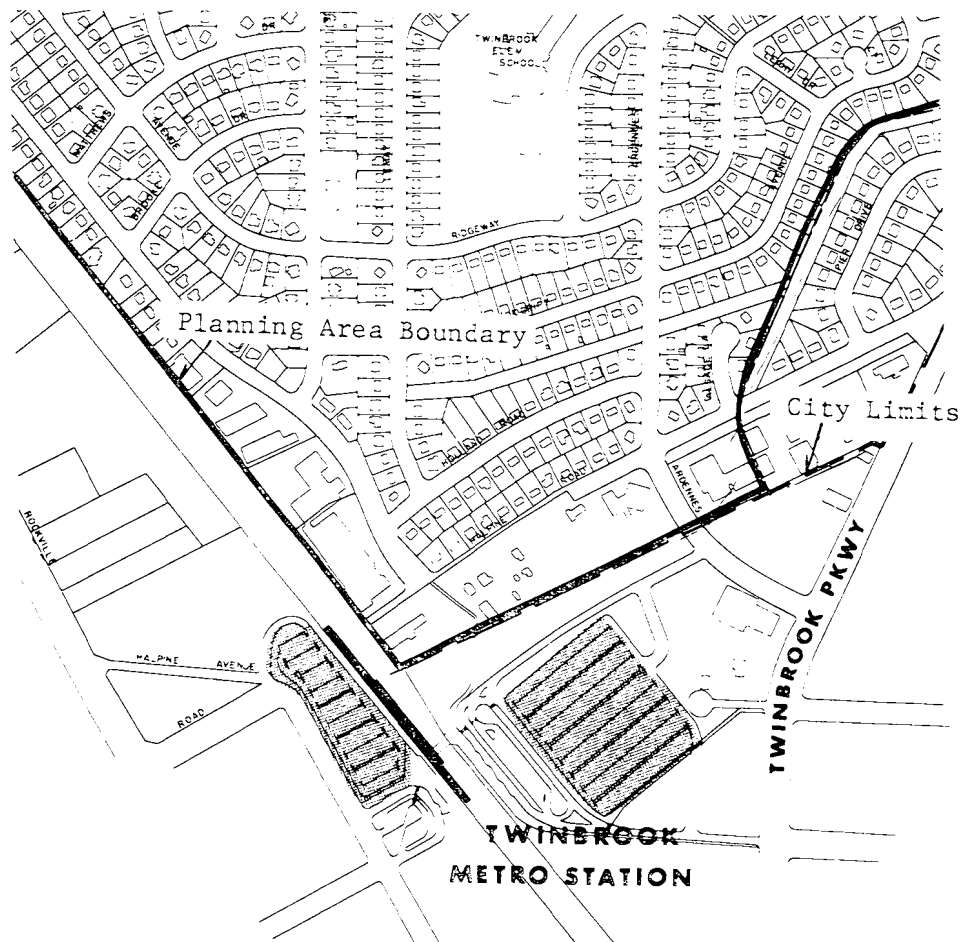
With this in mind, a comprehensive three stage parking program is recommended in addition to the existing permit Parking Areas Ordinance for this area. Stage 1 includes that area already under the permit system in the Halpine Road area. (See Appendix 4 for text of Ordinance or Section 11-101A Parking Permit Areas and stage by stage descriptions). This area should be extended to include Vandergrift Avenue between Lemay Road and Leahy Drive. Stage 1 is recommended for immediate implementation. Stage 2 is proposed for response to the anticipated Metrorail service area, and should be implemented one month before Metrorail service begins. Stage 3 is proposed as a backup zone in case commuters are willing to walk farther than anticipated to the Metrorail and local office facilities. Stage 3 is a reserve zone and should only be implemented if conditions warrant it.

Implementation of a permit system should conform to Ordinance 40-79 in terms of issuing permits, signing and enforcement. However, unlike the Ordinance, the parking zone should be implemented as a single unit rather than block by block. The residential area should be monitored intensively, especially during the first few months of parking zone implementation. If the Washington, D. C. experience is repeated in this area, enforcement will be critical coincident with the opening of Metro.

ALTERNATIVE TRANSPORTATION

Metrorail Service

Metrorail service will be a tremendous convenience to Twinbrook residents for commuting to work, shopping and entertainment opportunities. It will also bring increased amounts of pass-through traffic and infringe on neighborhood parking privileges. For some residents, the inconvenience could outweigh the advantages. However, for many residents, the Metro will provide an inexpensive alternative to using their own cars as gas prices and highway congestion increase.

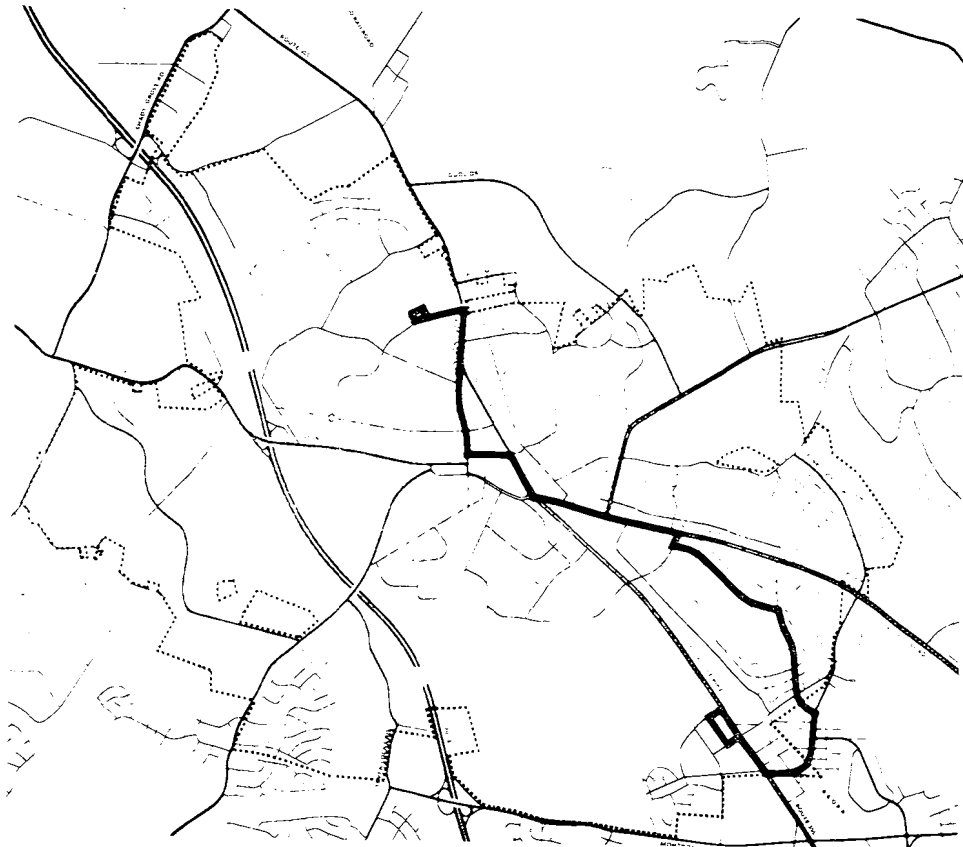


"Mini-Bus" Service

"Ride-on" minibus service has been discussed by the City of Rockville and Montgomery County for several years. A route is proposed into the Twinbrook Neighborhood. The County has committed itself to providing Ride-on service in time for the opening of Metrorail service. This would allow a convenient, inexpensive feeder system to Metrorail or Metrobus transit. The City of Rockville has proposed the following route, subject to modification upon number and location of users. This system is recommended for implementation as soon as possible, and should be operating before Metrorail service begins.*



PHASE I "RIDE-ON"
PROPOSAL

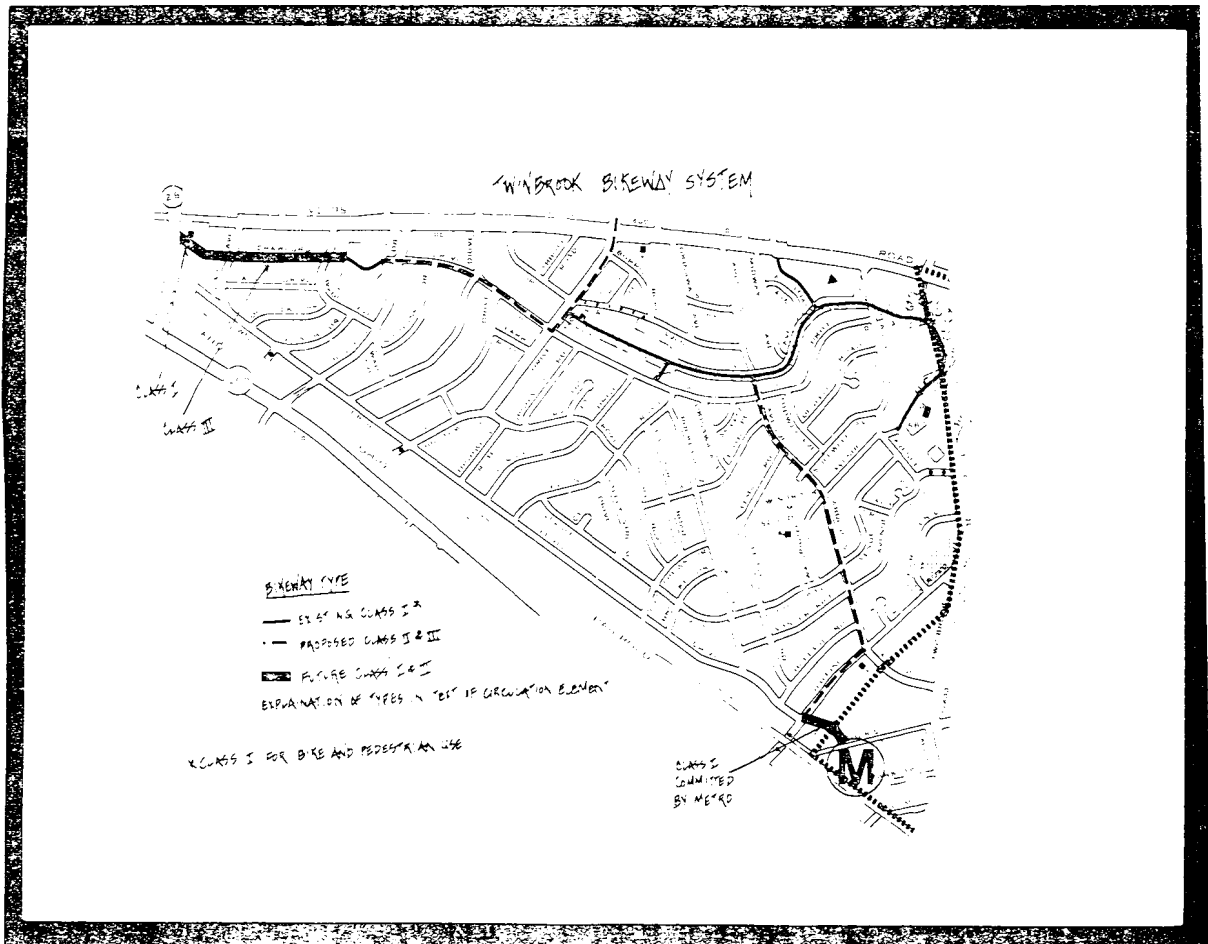


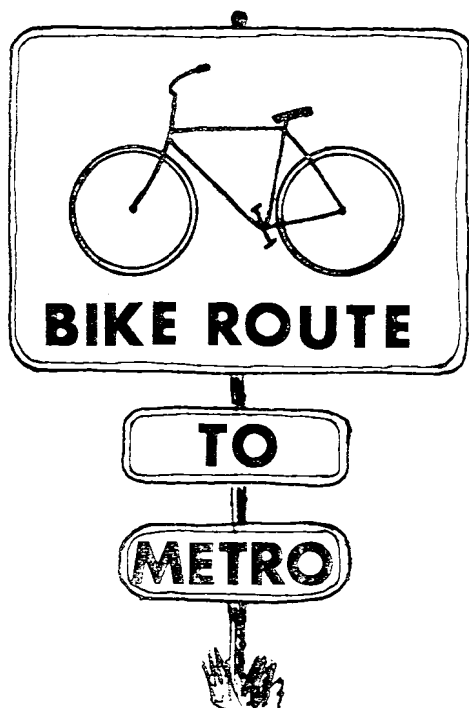
*A proposal to extend County sponsored "Ride-on" Minibus service to Rockville, Maryland, City of Rockville, Department of Planning, April 1979, p. 17.

Pedestrian/Bikeway System

As more people choose alternatives to the automobile for commuting, provision of pedestrian and bikeway paths has become imperative. Reduction of vehicle/pedestrian conflicts to allow this transportation choice to be a safe option is also crucial. The following discussion focuses primarily on biking, but in the broadest sense applies to all forms of alternative transportation.

The advent of the new Metrorail station in the Twinbrook Neighborhood provides an opportunity to design efficient bicycle routes to assist commuters. The development of the proposed route is based upon specific criteria for safety and attempts to respond to the needs of Twinbrook and City residents. The safety of the proposed route was the primary criteria taken into consideration. This required assessment of anticipated volumes of traffic on roads within the community, as well as the availability of on-street and off-street parking for residents. Secondly, the efficiency of the route was examined. This was important to provide the most direct route that was physically possible. The third consideration was cost; different classes of bicycle routes have varying prices. Fourthly, the comprehensive nature of the proposed system was analyzed with the City as a whole. It is anticipated that the Metrorail station will attract cyclists from outside the Twinbrook Neighborhood. To accommodate them, linkages to the Twinbrook bike path, for instance, have been suggested to allow for ease in commuting from one neighborhood to the Twinbrook station. (This proposal is compatible with City and County bikeway plans as shown in Appendix 3).





Bicycle traveling facilities can be divided into three classes of bikeways based upon the degree of separation of the bicycle and the motor vehicle. A Class I facility, a Bike Path or Trail, provides for an exclusive right-of-way thereby reducing or eliminating confrontation between bicycles and motor vehicles. Although the safety factor is maximized, the highest construction costs are associated with a Class I route. Its use may be limited in urban areas where there is great competition for space.

A Class II facility, or Bike Lane, allows for semi-exclusive use of a street or sidewalk. It would be located between

the right hand travel lane of cars and the edge of the curb, or between the right hand travel lane of cars and a row of parked cars. In either situation, bicycles have exclusive right-of-way in this area, except where motor vehicles and pedestrians must cross at intersections, park, or enter and leave a driveway. The separation between motor vehicles and bicycles is provided by a raised curb or small barrier, or painted lines and markings. Because this roadway is shared between motor vehicles and bicycles, there is a lower degree of safety than there would be with a Class I. However, the cost of construction would be significantly lower.

Class III designates any Bike Route. A right-of-way is shared by bicyclists and motor vehicles, marked by signs only. The signage cautions motorists that cyclists may be present. Although this option is less safe than Classes I or II, the cost factor is minimized. In a heavily developed area, a Class III system may be the only one possible. It may also be used to link existing or future Class I bikeways where such a connection could not otherwise occur.

RECOMMENDATIONS

1. Peripheral regulatory controls should be located at points of significant non-resident pass-through. The Traffic Engineer should perform a count to establish the current pass-through rate. Traffic counts to measure this factor should be taken annually at Ardennes Avenue and Atlantic Avenue and other streets where non-resident pass-through traffic becomes apparent. A "No Right Turn, 7:00-9:00 A.M." should be located at Ardennes Avenue and Viers Mill Road to limit access to Ardennes Avenue from east bound Veirs Mill Road traffic at least one month prior to the opening of Metrorail service. A "No Right Turn, 7:00-9:00 A.M." should be a future option of the Traffic Engineer at Broadwood Drive and Veirs Mill Road.
2. A "No Thru Trucks" sign should be placed on Rockville Pike bound northeast before the bridge. This should in place prior to the opening of the Edmonston Drive bridge. A corresponding sign should be located on Veirs Mill Road for southwest bound truck traffic.
3. A "No Left Turn 5:00-7:00 P.M." sign should be located on Ardennes Avenue opposite the Metro Station entrance to discourage evening pass-through traffic. This peripheral regulatory control should be put in place upon the opening of Metro service.
4. Halpine Road should be widened to 26 feet overall and improved with curb and gutter on the south side of Halpine Road from Lewis Avenue to Ardennes Avenue.

5. Parking should be restricted to one side only on Atlantic Avenue to improve negotiation along this street.
6. Implement a three stage permit parking program based on Map 2 shown in the text. The extension of Stage I to include Vandergrift Avenue between Lemay Road and Leahy Drive is recommended as soon as possible. This would also include Lemay Road between Vandergrift Avenue and Holland Road.
7. The City should continue efforts to establish "Ride-on" minibus service for Twinbrook and the City prior to the opening of Metrorail service.
8. Promote public awareness of the City's willingness to make curbcuts for driveways at a modest cost. Detail in Community Service and Facilities element.
9. Bikeway Route Proposal should be implemented by Fiscal Year 1983 according to the map in the text. A detailed description of that route appears in Appendix 2.
10. Proper signage will be placed at selected intervals to formally acquaint both the motorist and the bicyclist with the designated route. Each location will have a sign with a bicycle painted white onto a green background, with the words "BIKE ROUTE" on it. An example is shown on MAP 5. Additional signs may also be affixed to it; all signs, as well as their precise location, are explained in Appendix 3.

COMMUNITY SERVICES AND FACILITIES

COMMUNITY SERVICES AND FACILITIES

INTRODUCTION

The City of Rockville is responsible for most public services and facilities within City limits. The City handles everything from water supply to provision of recreation programs. Responsibilities for some services are shared, such as police and social services. Others are solely supplied by Montgomery County including education, fire/rescue and libraries.

Most services in the Community Services and Facilities element are provided at a City-wide level and will be discussed in a general fashion. First, an inventory of existing facilities is listed, followed by a discussion of future and proposed facilities. Then, community services are indicated and evaluated.

POLICIES

7. Ensure maintenance and enhancement of all public facilities for the betterment of the community.
8. Establish a regular meeting with the Planning Commission for planning liaison on issues affecting the Twinbrook area.
9. Provide the Twinbrook Neighborhood Planning Area with the best possible community services within the neighborhood boundaries and throughout the City.

GUIDELINES

1. Provide responsive service to all City residents.
2. Continue stringent maintenance programs for all public facilities to ensure the best possible condition of all City structures.
3. Encourage other government agencies providing services within the City to maintain the highest possible standards at all times.

An important consideration when evaluating services is knowing the potential client. A special survey was sent to residents within the neighborhood to help ascertain this information (survey detail in Appendix 7). In the Twinbrook neighborhood there are several interesting comparisons to be made by age group category. Overall, the neighborhood has fewer seniors than the City of Rockville average. The small population of those over

sixty is typified by Twinbrook subdivision although the Rockcrest and Halpine subdivisions having a greater concentration of those over sixty years of age. However, Twinbrook subdivision has nearly twice the typical portion of children under five years of age as compared to the City. The following table shows a comparison of the City-wide norm to the individual subdivisions. Percentages are used for ease of review. Note the large percentage of the population which is over 60 in the Rockcrest subdivision. The Halpine subdivision is not as significant due to the small population group within this area. For more detail refer to the appendix where age groups are described by subdivision.

SELECTED PERCENTAGE OF POPULATION BY SUBDIVISION

<u>City Norm</u>	<u>Halpine</u>	<u>Rockcrest</u>	<u>Rockland</u>	<u>Twinbrook</u>	<u>Total Neighborhood</u>
60+(12.8%)	13.4	15.1%	9.2%	5.7%	10.5%
0-4 (6.85%)	3.6	8.9%	5.1%	11.1%	8.7%

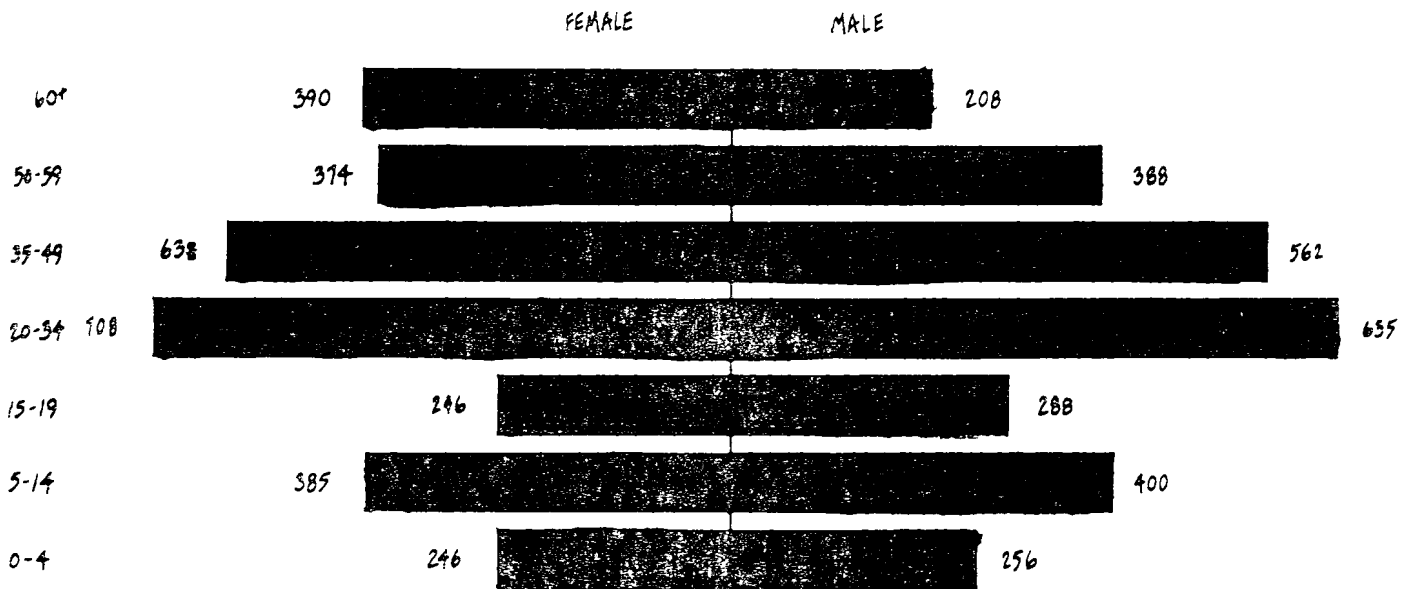
The Twinbrook population is currently estimated at 5,719 based on a Fall 1980 survey and preliminary census counts. This is a significant decline over 1970, although the new level can be expected to stabilize as children of the 1950's baby boom begin families of their own. It would appear that City programs, at least for the next few years should focus on adults as much as children. Emphasis on programs for seniors over sixty should focus on the Rockcrest subdivision for the greatest impact. In the short run, programs for youth should focus on the Twinbrook and Rockcrest subdivisions. Appendix 7 should be referred to for a more detailed age group breakdown.

EXISTING FACILITIES

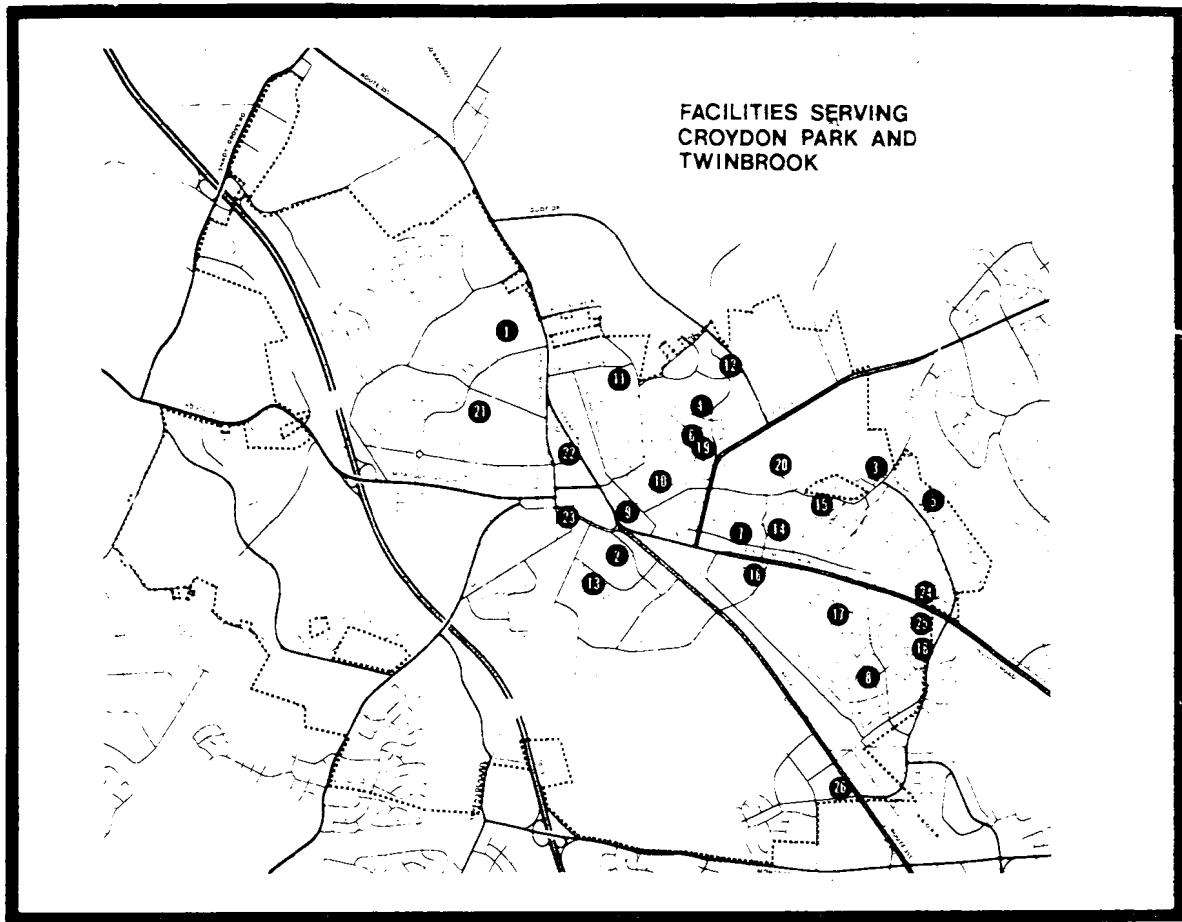
Facilities within the community are not run exclusively by the City of Rockville. Montgomery County Board of Education's neighborhood school program plays an important role. Several other County owned facilities serve the neighborhood including fire/rescue departments and public libraries. In the City of Rockville, most facilities from parks to the Civic Center are owned and operated by the City of Rockville.

The public sector does not have a monopoly on provision of services and facilities. There are private schools, churches and even swimming pools which offer a wide range of opportunities for the residents of Rockville. The following map and accompanying list of facilities attempt to identify most of the facilities which directly serve the Twinbrook Neighborhood.

AGE PYRAMID FOR
TWINBROOK NEIGHBORHOOD*



* AS ESTIMATED BY THE CITY OF ROCKVILLE PLANNING DEPARTMENT FROM SURVEY DATA IN FALL, 1980
DETAIL APPEARS IN APPENDIX BY SUBDIVISION



LOCATION OF COMMUNITY FACILITIES
(Numbers Correspond to Accompanying Map)

Schools

1. Montgomery College
2. Richard Montgomery High School
3. Rockville High School
4. Maryvale Middle School
5. Edwin W. Broome Jr. High School
6. Maryvale Elementary School
7. Lone Oak Elementary School
8. Twinbrook Elementary School
9. St. Mary's Elementary School

Parks

10. Pump House
11. Lincoln Park
12. Northeast Park
13. Elwood Smith Park
14. Silver Rock Park
15. Calvin Park
16. Hillcrest Park
17. Rockcrest Park
18. Twinbrook Park and Teen Center
19. Maryvale Park
20. Rockville Civic Center

Other Facilities

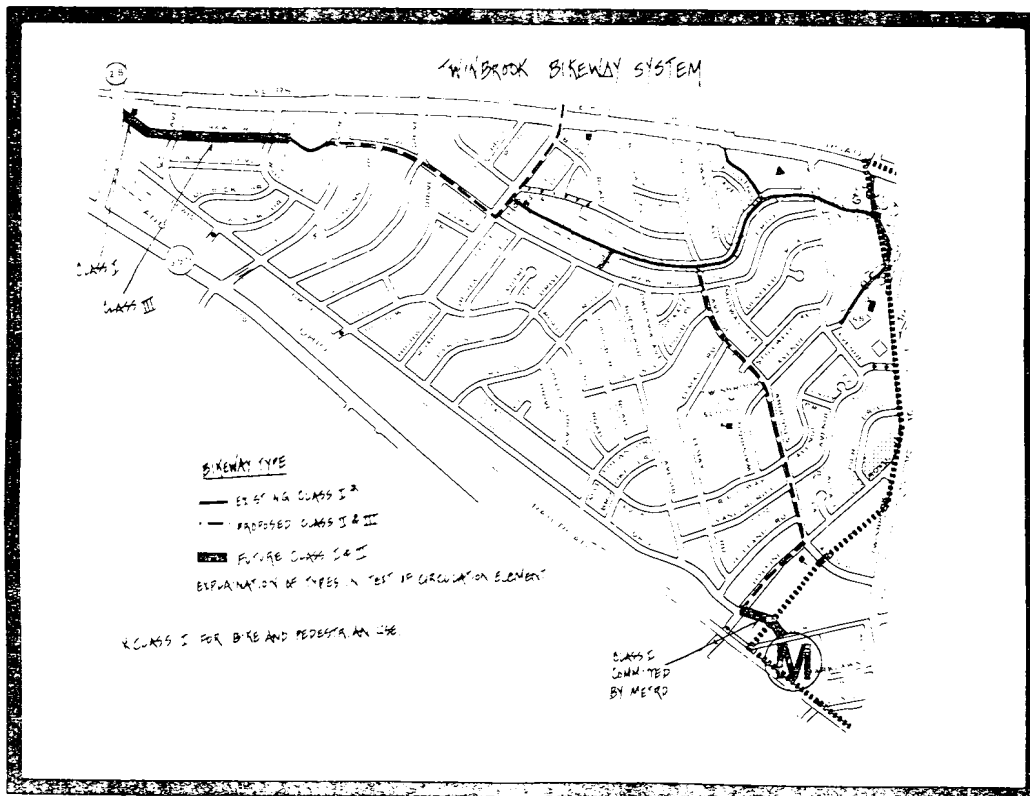
21. Rockville Municipal Swimming Center
22. Volunteer Fire Department - Company 3 - Hungerford Station
23. Rockville Public Library
24. Twinbrook Public Library
25. Twinbrook Neighborhood Swimming Pool
26. Volunteer Fire Department - Company 23

Survey results identify the Rockville Civic Center as the most used facility by Twinbrook residents responding to the survey. Over thirty-five percent of the neighborhood visits the Civic Center grounds occasionally. Interestingly enough, only some residents are using their local parks. The residents of Twinbrook subdivision are the heaviest users of their park (over fifty-four percent), most closely followed by Rockland with thirty-seven percent using adjacent park areas. Approximately, thirty percent of Rockcrest residents are occasional users of Rockcrest Park. A detailed breakdown of survey results is shown in Appendix 7.

A few special facilities are located within the Twinbrook neighborhood. A Teen Center offering supervised activities for teens is available. The stream valley park with a pedestrian/bikeway path running through the center of the neighborhood is unique within the City.

FUTURE AND PROPOSED FACILITIES

The only new facility required in the Twinbrook neighborhood is an extension of the existing pedestrian/bikeway system. A detail description of this proposal can be found in the "Circulation Element" of this plan. Metro will be extending a path for this purpose from Halpine Road to the Metrorail entrance. A proposed extension of the pedestrian/bikeway system suggests a path extending from the dead end of Crawford Drive out to the Veirs Mill Road and Route 28 intersection. This would afford safe and convenient access for residents in the Rockcrest subdivision who may choose to use the Rockville Metro Station instead of Twinbrook. The proposal would be implemented if development activity commences on the site. Suggested guidelines are set down in an appendix for appropriate development of all bike paths.



SERVICES

Emergency Services

Police services within the City of Rockville are handled by two complementary forces, the City and Montgomery County police departments. In addition to law enforcement activities, the City police force is responsible for park security, animal control, traffic control, and burglary prevention. In addition, the City Police Department operates a special juvenile program for first time offenders under eighteen called the "Alternative Services Program."

The Twinbrook neighborhood is part of two police "beats." These special service areas describe where patrol cars will circulate. In this case, the eastern edge along Twinbrook Parkway and bordering streets is part of one beat; the balance of the neighborhood falls into another. Each beat is patrolled by both City and County officers. The City and County police have a good relationship, recently demonstrated through the extension of "911" emergency dispatch system to include the City of Rockville Police Department.

Three important issues surfaced in the Twinbrook neighborhood when evaluating police services. The immediate concern deals with police visibility within the neighborhood. Many local residents claim they would not recognize a City police car if they saw one. Therefore, it seems necessary that some way of increasing police visibility within neighborhoods is perceived as necessary. The other two concerns deal with the future impact of Metro. Metro service will impact the surrounding neighborhood in a very direct way as described in the "Circulation Element - Parking Management" section. Parking in the Twinbrook area is a serious concern for residents since many streets are narrow and many do not have off-street parking. A more complete discussion can be found in the "Circulation Element." If a permit parking system is implemented, as it already has been in some locations, it is necessary that effective enforcement accompany proper signage to smooth implementation. It becomes important for the Police Chief to have adequate staff to monitor permit parking areas as they expand at the time of Metro's opening. Surveillance is also a consideration for the other Metro related enforcement issue. City and County police are responsible for policing the Metro parking areas against all crime. Adequate staff must be available for frequent surveillance of the parking areas and immediately surrounding walkways.

Fire/rescue services are provided as part of the Montgomery County service program. The Twinbrook neighborhood is served by two volunteer departments: Company 3 at Hungerford Drive and Company 23 on Rollins Avenue. Emergency service responds to approximately 3,500 calls annually. They are prepared for the future with equipment more than adequate to serve both the Rockville and Twinbrook Metrorail Stations.

An important component of any emergency service discussion is provision of sufficient hospital services to aid the community. Rockville is fortunate to be served by the following hospitals in the area:

1. Holy Cross Hospital, Silver Spring
2. Suburban Hospital, Bethesda
3. Washington Adventist Hospital, Takoma Park
4. Montgomery General Hospital, Olney
5. Shady Grove Adventist Hospital, Rockville

The Rockville Community Clinic, Incorporated, provides low-cost medical and mental health services, free legal counsel and ancillary health care to the community.

Community Resources

This service is operated solely through the City of Rockville for City residents. Various programs under Community Resources include Youth Services, the Rockville Free Clinic, Human Rights, Special Services, Senior Citizen Services and the Lincoln Park Community Center.

An example of services available under the seniors program are "Mail Alert," "Vial of Life," "Good Neighbor Program," "Sunday Dinner Program," and the "Senior Sports Program" to name a few. Many programs for seniors are held over in the Rockville Civic Center Mansion. No specific recommendations have been suggested for this service area.

Public Works

The Public Works Department is involved in engineering, inspection, traffic engineering, water and sewer utilities, street construction, streetlighting, street maintenance, vehicle maintenance, refuse collection, and storm water management. The City has its own water treatment plant and distribution system which serves all of the Twinbrook Neighborhood.

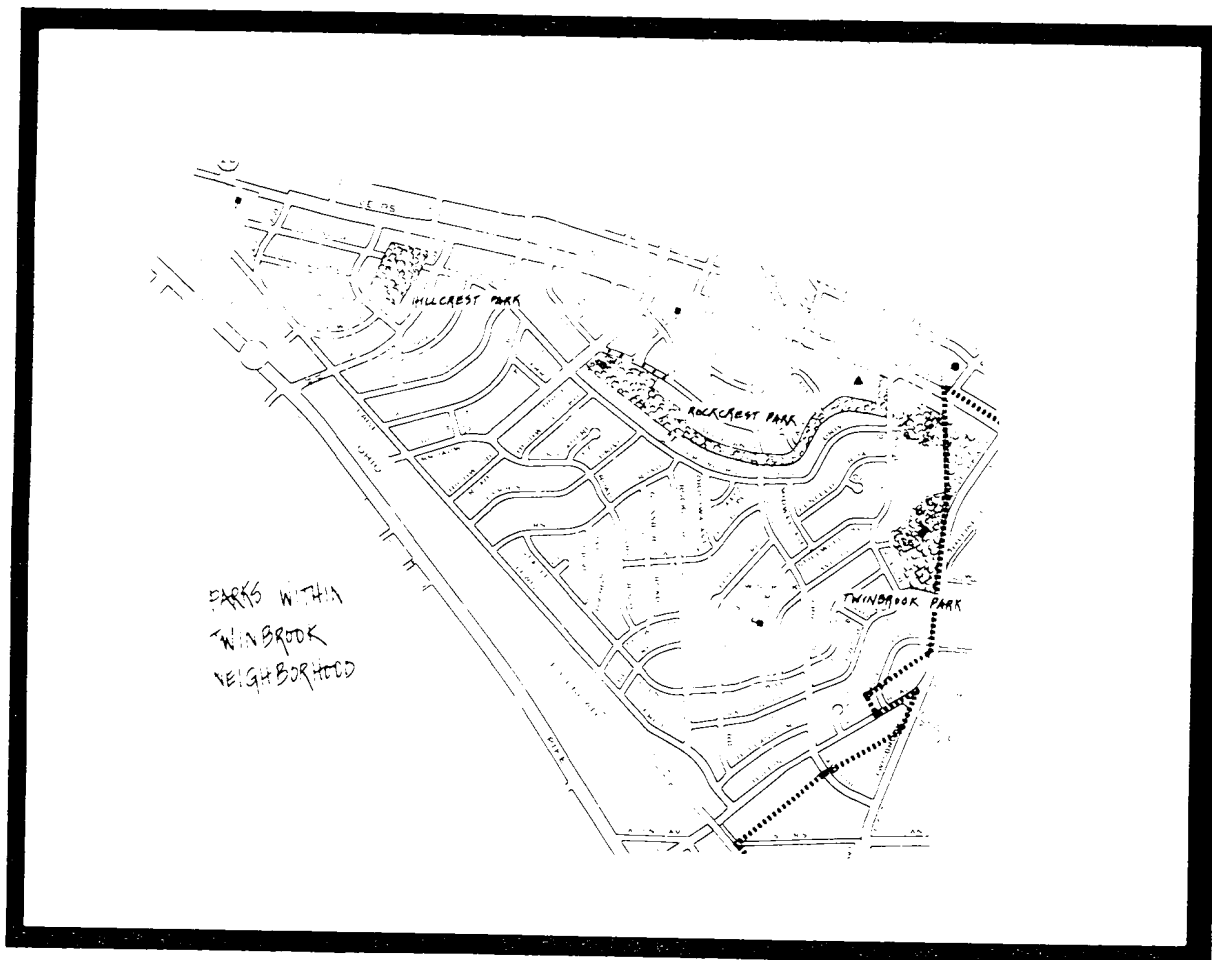
The only concern expressed about the public works program was to request a strong promotion of the City's willingness to make curbcuts for driveways at a modest cost. Citizen awareness of such programs is thought to be limited at this time. Also, continued vigilance in regards to the fall storm water problem north of Rockcrest Park and at the dead end of Crawford Drive is necessary.

It should be noted that this department will be responsible for placement of traffic control signs discussed in the "Circulation Element." This does not include bikeway/pedestrian signing.

Parks, Recreation and Open Space

The Department of Recreation and Parks includes recreation programs, classes, special events, arts, senior citizen programs, right-of-way and park maintenance, park development, municipal building maintenance, Civic Center Complex, Municipal Swim Center, and the Redgate Municipal Golf Course.

A wide range of City-wide activities and programs are offered by the City Recreation Department. Everything from "Street 70" plays, civic ballet productions to special kindergarten activity programs which combine recreation and learning. Of special interest to Twinbrook residents is a pre-school day care program located at the Twinbrook Elementary School which serves the community. The Teen Center facility is operated by the Recreation Department, at Twinbrook Park.



The Twinbrook Elementary School is a designated "community school" for the neighborhood. Through special funding agreement with Montgomery County, the school is available at no cost which allows the City of Rockville to offer an expanding array of classes and supervised recreational activities to residents of the neighborhood and the City. The strength of this program is dependent on the number of participants. The Recreation Department hopes to expand this program in the future.

The only concerns elaborated by residents of the area have been over park maintenance, particularly the portion of Rockcrest Park bordered by the Twinbrook Mart Shopping area. Special attention to the stream valley park areas is necessary to ensure the cleanliness and appearance for all residents of the City.

The Parks Department is responsible for the signing of the bikeway/pedestrian path to Metro as proposed in the "Circulation Element."

Licenses and Inspections

Licenses and Inspections is part of the Community Development and Housing Assistance Department. The Licenses Division handles all building permits and policies, housing and zoning code enforcement. Licenses and Inspections runs such programs as the Community Enhancement Program" and "Free Paint Program." These are revised in the "Land Use Element" of the plan.

Planning

The Department of Planning activities include long-range planning preparation and updating of the City General Plan, such as the "Neighborhood Plan," zoning administration and development review, subdivision control, historic preservation, transportation and capital improvement planning.

The Planning Department should continue monitoring the Twinbrook neighborhood for impacts on the area, especially impacts related to the opening of Metro. This plan should be comprehensively reviewed with members of the neighborhood until after Metro opens for reaffirmation and review.

The Planning Commission will hold an annual meeting to study emerging problems and consider new opportunities for the neighborhood, including examination of circulation issues. Meetings should be held in the neighborhood.

RECOMMENDATIONS

1. Establish a Class I bikeway across the Moran Tract, between Crawford Drive and the intersection of Route 28 and Veirs Mill Road when

this tract is ultimately developed as an extension of the Stream Valley bikeway/walkway system. (Note detail under "Circulation Element.")

2. It is important to the neighborhood that the police force make every effort to increase its visibility within the neighborhood.
3. When Metro service begins, extra police staff may be needed to monitor permit parking areas, traffic control signs, and maintain special surveillance of Metro parking lots and the immediate surrounding neighborhood. It is requested that the police chief determine any additional staffing requirements and publicize this information by 1983.
4. The Public Works Department should have regular publicity campaigns to inform residents about its driveway "curb-cut" program. This is especially critical in areas like the Twinbrook Neighborhood.
5. A strong park maintenance program is necessary in the Rockcrest Park area where residences and businesses back up onto park property and dumping occurs. Strong enforcement against dumping is necessary. Neighborhood cooperation is essential in aiding the Recreation and Parks Department to do their job.
6. The Licenses and Inspection Division is encouraged to continue promotion of the Free Paint and Community Enhancement Programs in the future. The Planning Commission will hold an annual meeting in the Planning Area to study emerging problems and consider new opportunities for the neighborhood, including examination of circulation issues.

APPENDICES

APPENDIX 1

HOUSING POLICY FOR MONTGOMERY COUNTY, MARYLAND

Housing Development Close to Metro

The development of the areas surrounding Metrorail stations presents a major opportunity for Montgomery County. The creation and enhancement of attractive, vital urban communities around this transportation resource must be assured.

Commercial uses command higher land values and provide greater returns than residential uses. The current development trend for areas adjacent to Metro stations emphasizes commercial development. Continuation of this trend may result in a lack of diversity in the transit impact areas. This would be inefficient from the standpoint of providing housing close to job opportunities and transportation.

Realistic goals for housing production and appropriate incentives should be prepared to increase the amount of housing likely to be developed within transit impact areas without intensifying the use of these areas.

Preservation of the Existing Housing Supply

A major housing resource affordable to persons of low and moderate income is the existing housing in the urbanized areas. Older, single-family homes are frequently occupied by long-time County residents of moderate means. Government-sponsored rehabilitation loans can assist these families in maintaining their homes and hence in preserving their neighborhoods. However, the units themselves are destined to disappear from the moderate-income housing supply at resale, due to current market forces.

The County has a Single-Family Rehabilitation Program which annually provides assistance to about 60-75 households and makes loans with a total value of approximately \$750,000. The program is funded from a variety of federal, state, and local sources. This program should continue at its present level.

Much of the older rental housing is nearing the end of its useful life and is subject to change through redevelopment or rehabilitation. This housing is steadily disappearing through conversion to condominium ownership. Condominium conversion can upgrade neighborhoods through rehabilitation, which increases property values and owner occupancy. However, conversion may result in serious social disruption by displacing households least able to compete for housing and by increasing housing costs over earlier levels. This phenomenon also constrains the supply of affordable rental housing and increases overall housing costs.

In November 1979, the County's Condominium Conversion/Housing Production Program was released. Since then, the government has moved steadily forward to implement all aspects of this program. This activity must remain a priority of the government.

Empty-Nester Housing

Few down-County housing opportunities are available to empty-nesters who might wish to vacate their single-family residences. As the supply of affordable ownership or rental opportunities at locations convenient to the elderly diminishes, overall mobility in the marketplace also decreases. This results in a reduction in choice for households of all age groups and an increasing mismatch between housing needs and actual utilization. More empty-nester housing is needed.

Housing Development in the Transit Impact Areas

The balanced development of Montgomery County areas that are in close proximity to the sites of present and future Metro stations presents both a prime opportunity and a major responsibility to the County's elected officials. Much has been done to prepare for the long-awaited arrival of this transportation resource. Master Plans have been amended, sector plans adopted and new zones devised. The allowance for high density development in some of these areas, particularly in Central Business Districts, has already in a large part been accomplished.

Although housing is both permitted and encouraged in these areas, available information indicates that little has been or will be constructed. The most significant reason for this trend appears to be the higher economic return that can be realized from the development of commercial and office rental space. Obviously this is not a purely local problem but one that is national in scope. Additional obstacles to housing development may be presented by the requirements imposed by the MPDU law, the fear of future imposition of rent control, and the parking requirements associated with construction of residential units with the parking districts.

The possibility of housing production failure in these areas is a matter of serious concern to the County. New housing represents a vital and attractive use that is essential for the best utilization of the transit facility. The location of housing in these areas will provide for pedestrian access to Metro and to the variety of business, governmental, and commercial establishments present in these areas. Additionally, housing will bring people into these areas during non-business hours. Without housing, these areas may be only business and commercial centers--vital, congested, and active during the day, but deserted at night. The experience in Rosslyn, Virginia, or the K Street corridor in downtown Washington indicates that a better mix of activities should be attempted.

Adaptations to Single-Family Homes

The number of members in a household, the ages, and the number of generations included change over time. The typical American family of the 1950s and 1960s was seen as a mother, a father and their three growing children. Such a view is a snapshot of a particular moment in the life of a family.

When family size changed in the 1950s and 1960s, there was greater mobility in the housing market and many families opted to move to larger or smaller units as conditions demanded. Another choice available then, as now, was to adapt the dwelling by finishing basements, attics, or screened porches to add additional living spaces.

As the ability to move is reduced through high purchase and interest costs and instability in the rental market, more and more families will look to the adaptation of their current living spaces. Two trends have been particularly notable in recent years. Grown children, who cannot afford independent living at today's high housing costs, stay at home longer. Similarly, older parents move in with their grown children or make room in their own home for children and their families.

When two or more generations of adult family members find themselves living together by choice or by necessity, they may choose to adapt their dwelling to accommodate the varying needs of the different generations. Such adaptations are now permitted within the definition of single-family housing in the Zoning Ordinance, which restricts occupancy to directly related individuals or five or fewer unrelated individuals.

The government now issues building permits for such adaptations, including the provision of a second kitchen to respond to special family needs. However, care must be taken to assure that the principle of single-family occupancy is maintained. Dwelling units which have been adapted present special problems at resale. The revision of the housing code now in progress should provide a means of assuring adherence to the occupancy provisions of the Zoning Ordinance.

Empty-Nester Housing

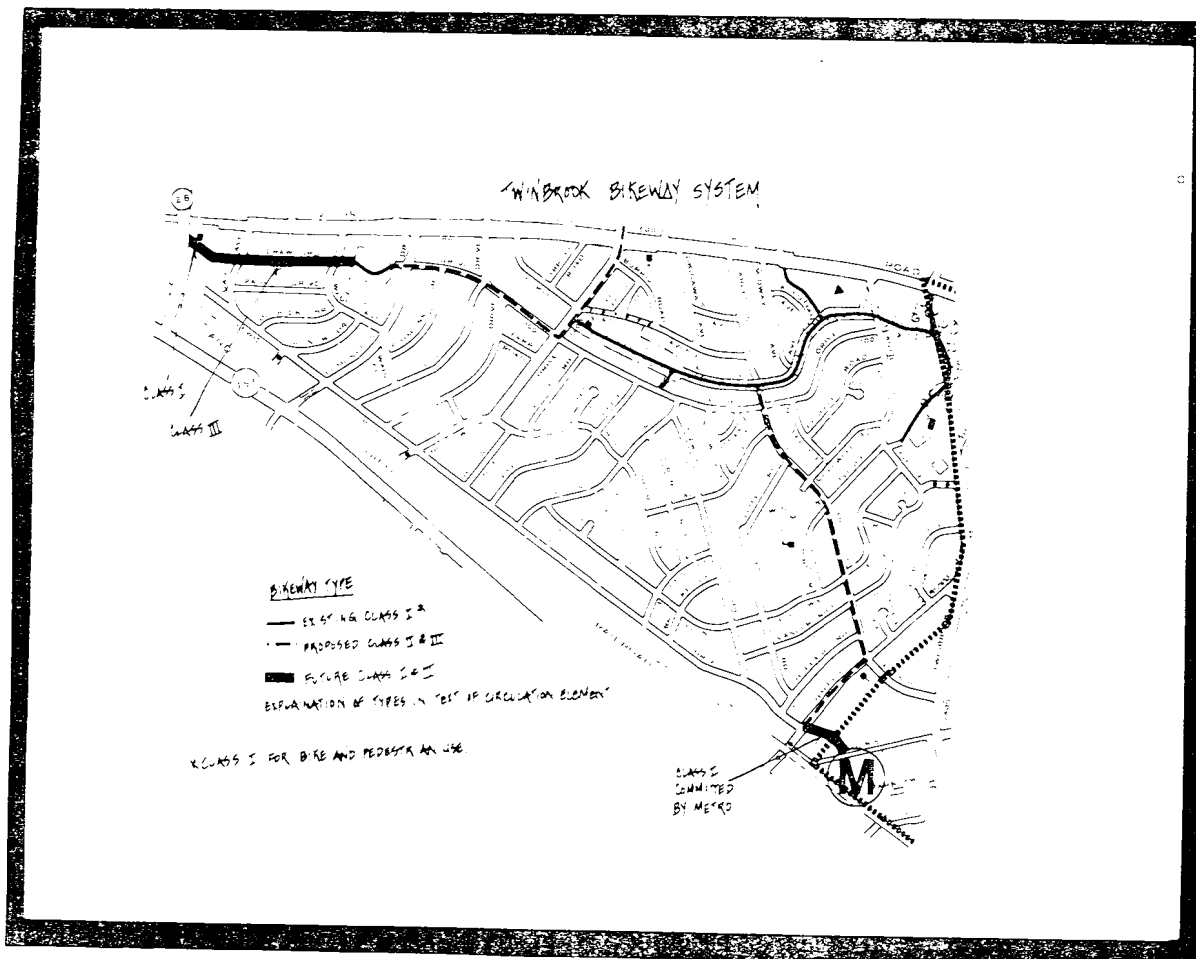
Production of housing for older persons should not be limited to developments providing large subsidy through Sections 8/202 and limited to persons 62 years of age and older. Housing for empty-nesters whose incomes exceed 80 percent of the Metropolitan area's median income and who may not yet be 62 is needed if greater mobility in the housing market is to be achieved. Production of housing to serve the needs of this population should be encouraged by using a variety of public and private resources such as Opportunity Housing sponsored by HOC, the Planned Retirement Community Zone and the development of condominium or cooperative projects for the elderly.

APPENDIX 2

PROPOSED BIKE ROUTE

Based upon the four fundamental concerns stated under the Pedestrian/Bikeway System discussion in the Circulation Element, the following proposal has been recommended:

A bicycle route (Class III) will be established along Crawford Drive. It will begin at the west entrance of Hillcrest Park at Crawford Drive on the existing Class I bike trail through Hillcrest Park. From the east egress of the Hillcrest Park Bike Path, the bicycle route will continue east along Crawford Drive to Broadwood Drive. At this intersection, the route will continue left down Broadwood Drive as a Class III, for 300 feet until the entrance to the existing Twinbrook Bike Path on the right. A bicycle path will also be designated along Broadwood Drive from Veirs Mill Road southwest to Coral Sea Avenue. The north side of this segment of Broadwood Drive will be designated as a Class II, and the south side as a Class III. A left turn at Coral Sea Avenue will link this part of the route to the existing Twinbrook Bike Path, as well as to the route traveling north down Broadwood Drive. Both routes will now feed into the Twinbrook Bike Path. The cyclist can now travel east on this Class I route to Ardennes Avenue.



A bike route will be designated along Ardennes Avenue from its intersection with Twinbrook Bike Path south to Halpine Road. This will be a Class III route, except for approximately 430 feet located adjacent to the property of the Twinbrook Elementary School. This will be a Class II Bike Lane. A right hand turn from Ardennes Avenue will place the bicyclist on Halpine Road. A Class III route to link Ardennes Avenue with the Class I Twinbrook Metrorail Station bike path will be established.

APPENDIX 3

RECOMMENDED LOCATIONS FOR BIKEWAY SIGNS

<u>Location</u>	<u>Additional Sign(s)</u>	<u>Direction Sign Faces</u>
1. SE corner of Crawford Drive and Wade Avenue intersection.	a. Arrow pointing up b. Sign: "BEGIN"	West
2. SE corner of Crawford Drive and Hillcrest Bike Path (west egress) intersection.	Arrow to right	West
3. SE corner of Crawford Drive and Edmonston Drive intersection.		West
4. SE corner of Crawford Drive and Claggett Drive.		West
5. SW corner of Crawford Drive and Broadwood Drive intersection.	Arrow to left	Northwest
6. SE corner of Broadwood Drive and Coral Sea Avenue intersection.	Arrow to right	Southwest
7. SW corner of Veirs Mill Road and Broadwood Drive intersection.	a. Arrow pointing up b. Sign: "BEGIN" c. Sign: "TO METRO"	North
8. NW corner of Coral Sea Avenue and Broadwood Drive intersection.	Arrow to left	North
9. SW corner of Ardenne Avenue and Twinbrook Bike Path intersection.	Arrow to right	West
10. NE corner of Ardenne Avenue and Twinbrook Bike Path intersection.	Arrow to left	East

<u>Location</u>	<u>Additional Sign(s)</u>	<u>Direction Sign Face</u>
11. NW corner of Ardennes Avenue and Crawford Drive intersection.	a. Arrow pointing up b. Sign: "TO METRO"	North
12. NW corner of Ardennes Avenue and Wainwright Avenue intersection.		North
13. NW corner of Ardennes Avenue and Halpine Road intersection.	a. Arrow to right b. Sign: "TO METRO"	North
14. On the north side of Halpine Road between Ardennes Avenue and Lewis Drive, approximately 400 feet from Halpine Road and Ardennes Avenue intersection.		East
15. On the north side of Halpine Road between Ardennes Avenue and Lewis Drive, approximately 100 feet from Halpine Road and Lewis Drive intersection.	a. Arrow to left b. Sign: "TO METRO"	Northeast
16. On the south side of Halpine Road between Ardennes Avenue and Lewis Drive, approximately 100 feet from Halpine Drive and Lewis Drive intersection.	Arrow to right	Southeast
17. SW corner of Halpine Road and Ardennes Avenue intersection.	Arrow to left	South
18. NE corner of Ardennes Avenue and Vandergrift Avenue intersection.		South
19. NE corner of Ardennes Avenue and Wainwright Avenue intersection.		South

<u>Location</u>	<u>Additional Sign(s)</u>	<u>Direction Sign Faces</u>
20. SE corner of Veirs Mill Road and Broadwood Drive intersection.	Sign: "END"	Northeast
21. NW corner of Broadwood Drive intersection.	Arrow to right	South
22. NW corner of Crawford Drive and Clagett Drive in- tersection.		East
23. NW corner of Crawford Drive and Edmonston Drive intersection.	Arrow pointing up	East
24. NE corner of Crawford Drive and Wade Avenue intersection.	Sign: "END"	East

APPENDIX 4

PERMIT PARKING RESOLUTION

STAGE 1

Stage 1 calls for the immediate implementation of an extended parking permit program to include Halpine Road (from Lewis Avenue to Twinbrook Parkway), Holland Road, Alsace Lane, Pier Drive, Vandergrift Avenue (from Lemay Road to Leahy Drive), Lemay Road (from Holland Road to Ridgeway Avenue), and Ardennes Avenue (from Halpine Road to Ridgeway Avenue).

STAGE 2

This stage recommends the mandatory implementation of the parking permit program to be extended. The streets to be included in Stage 2 are: Vandergrift Court, Vandergrift Avenue (from Rockland Avenue to Lemay Road, and from Leahy Drive to Twinbrook Parkway), Ridgeway Avenue (from Rockland Avenue to the east side of Leahy Drive), Stanley Avenue (from Matthews Drive to Rockland Avenue), Leahy Drive, Brooke Drive, Matthews Drive, Rockland Avenue (from Lewis Avenue to Matthews Drive), Lemay Road (from Ridgeway Avenue north to that point on Lemay Road where it veers to the northeast), Wainwright Avenue (from Ridgeway Avenue to Ardennes Avenue), and Ardennes Avenue (from Ridgeway Avenue to Wainwright Avenue), and Lewis Avenue (from Holland Road to Matthews Drive).

STAGE 3

Stage 3 provides an optional recommendation to be implemented, if necessary, after Metrorail is opened. This stage includes the following streets: Lewis Avenue (from Matthews Avenue to Thornden Road), Stanley Avenue (from Matthews Drive to Thornden Road), Stanley Court, Valley Stream Drive, Thornden Road, Henry Road (from Matthews Road to Thornden Road), Halsey Road, Gainsboro Road, Rockland Avenue (from Matthews Drive to Thornden Road to Atlantic Avenue), Ardennes Avenue (from its intersection with the Twinbrook Bike Path to Wainwright Avenue), Midway Avenue (from Crawford Drive to Stillwell Avenue), Denfield Road, Denfield Court, Stillwell Avenue, Wainwright Avenue (from Ardennes Avenue to Atlantic Avenue), Atlantic Avenue (from Crawford Avenue to Vandergrift Avenue), Ridgeway Avenue (from Leahy Drive to Atlantic Avenue), and Lemay Road (from Ardennes Avenue southwest to the point where it joins with that portion of Lemay Road which is cited under Stage 2).

APPENDIX 5

BIKEWAY DESIGN STANDARDS

Pavements:

Pavement should be smooth. Narrow slots that could catch bike wheels should not be greater than 1/2 inch for parallel cracks and not more than 3/4 inch for perpendicular. Ideally there should be no cracks or irregularities.

Signals:

At intersections with heavy bicycle travel, cyclists should be considered in the timing of the signal cycle, particularly in multi-lane intersections where the cyclist may not have sufficient time to cross. An all red clearance interval could be used for example. To check, use a bicycle speed of 10 MPH and a perception/reaction/braking time of 1.8 seconds.

Shoulders:

Pavement edge lines should be used rather than a surface texture technique. It should be at least 4 feet wide. Greater width should be considered if there is heavy truck, bus, or recreational vehicle traffic.

Wide Curb Lanes:

Fourteen foot width is desirable, 12 feet or wider is acceptable so that motorists do not need to change lanes to pass cyclists. Care must be taken to assure that the lane is not made dangerous by enabling two motor vehicles to operate in one lane.

Bike Routes:

The roadway width, along with traffic factors such as volume, type of traffic, parking conditions, and stopping sight distance ^{1/} should be considered when determining the feasibility of a bicycle route. Roadway improvements including safe drainage grades or gutter pans, railroad crossing, smooth pavements, curb cuts, and signals responsive to bicycles should always be considered before a roadway is identified as a bicycle route.

^{1/} Stopping sight distance is the distance a cyclist would travel from the point of first spotting an object to the point where the vehicle stops after break.

Bike Lanes:

Raised barriers and raised pavement markings represent a hazard to the cyclist and should only be used on bike path separate from roadways, and only if absolutely necessary. Bicycle lanes should always be one-way on one side of the roadway and flow in the same direction as adjacent vehicular traffic. Two-way bike lanes on one side of the roadway cause major accidents. 2/

There are three appropriate locations for bike lanes:

1. Urban Curbed Street/Parking Allowed:

Bike lanes should always be located between the parking area and automobile lane. Bike lane location between the parking area and curb presents potential risk from opening car doors and poor visibility, especially at intersections. The minimum width at this location should be five (5) feet with an additional one or two feet if traffic volume or parking turnover is substantial.

2. Urban Curbed Street/Parking Prohibited:

Bike lanes in this location should have a minimum width of four (4) feet with an additional one or two feet if a gutter pan exists. This is because cyclists do not generally ride in the gutter because of the possibility of debris, and to prevent bicycle peddle contact with the curb. However, frequent sweeping may be necessary if road debris presents a hazard.

3. Highway Without a Curb or Gutter:

Bike lanes located between the travel lane and shoulder should be at least four (4) feet wide. Additional widths should be considered if substantial truck or bus traffic is normal on that section of roadway.

Treatment of bikeways at intersections should be given special consideration. This should include appropriate signage and markings located to provide sufficient reaction time. Three turning maneuvers are particularly dangerous and should be recognized. They are: right turning motorists conflict with through cyclists; through motorist conflict with turning cyclist; and left turning motorists conflict with through cyclists.

2/ Federal Register, Vol. 45, No. 151, Monday August 4, 1980, Proposed Rules, p. 51724

Bike Paths:

Width and clearance - Two-way bike paths should be a minimum of eight (8) feet wide. One-way bike paths should be a minimum of five (5) feet wide. In some instances it may be necessary to increase the width to 10 or 12 feet because of substantial bicycle volume or shared use with joggers and other pedestrians, large maintenance vehicles or use where cyclists ride two abreast. In such cases, the Washington Area Bicyclist Association suggests a four foot lane width for each cyclist and a two foot width for each pedestrian to be accommodated at the same time. In addition, a two foot graded areas should be adjacent to both sides of the bike path pavement. However, where the bike path exceeds eight feet, the two foot graded areas may be reduced.

Bike paths should always be separated from the roadway to the maximum distance possible. When separation is minimal and clearance is less than five feet, a physical divider is acceptable. Such dividers may also be used to ameliorate problems of blinding caused by automobile headlights at night.

Vertical clearance should be at least eight feet.

Sidewalks:

Generally, sidewalks are not desirable for biking. However, in a few limited situations sidewalks may be acceptable. Where sidewalks have the characteristics of bike paths, and in residential areas where young children are the primary riders, the use of bicycles on sidewalks is admissible. Appropriate improvements, such as curb cuts, may be beneficial and advisable.

Design Speed:

Design speed depends on a variety of factors ranging from the type of bicycle and type of bike route to the physical condition of the cyclist and location of bike path. Bicycle paths should be designed for a selected speed that is at least as high as the preferred speed of the fastest riders.

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2. Recreational Trails: Standards and Guidelines for their Design, Use, and Management. Metropolitan Washington Council of Governments, Washington, D. C., July 1972.
3. Master Plan of Bikeways, Montgomery County, Maryland. Montgomery County Planning Board of the Maryland-National Capital Park and Planning Commission. Silver Spring, Maryland. April 1980.

APPENDIX 6

NEIGHBORHOOD SURVEY METHODOLOGY AND SELECTED RESULTS

In October 1980, a Neighborhood Perception Survey was distributed to households in the Twinbrook and Croydon Park neighborhoods, on behalf of the respective neighborhood planning advisory groups by the Department of Planning. In determining the sampling frame, each neighborhood was treated as an independent population; a 10% response rate was sought from each.

The Twinbrook neighborhood has approximately 1800 homes requiring responses from 180 households. To achieve this, 600 survey questionnaires were sent out; assuming a 30% response rate*, 180 were expected to be returned.

Croydon Park has approximately 800 homes, and therefore, 80 responses were desired. Two hundred and sixty-six questionnaires were mailed out because a response rate of 30% was expected to yield 80 returned surveys.

A systematic sampling procedure was incorporated. The first household to receive a survey was selected randomly, and then every third home in each neighborhood received a survey, ensuring an equal distribution of questionnaires throughout each neighborhood.

Eighty-seven percent of the residents responding are homeowners, suggesting neighborhoods of stable and committed citizens. The overwhelmingly high response rates from each neighborhood further demonstrates neighborhood support. A 38.6% rate of response from Twinbrook and 33.4% from Croydon Park, implies interest of local residents in their neighborhood 91.3% of the respondents from Twinbrook and 85.8% from Croydon Park "like there neighborhood" and are pleased with police, fire, recreational and street maintenance services provided.

Facilities such as the Rockville Civic Center, Twinbrook Park, and the Rockville library are most frequently used by Rockville residents of all ages. Shopping in downtown Rockville and at the Twinbrook Shopping Center are most convenient and attractive for the community.

Members of both Twinbrook and Croydon Park are anxiously awaiting the arrival of the new Metrorail Stations in their respective neighborhoods. Approximately three out of four respondents (76.3%) intend to use Metrorail service when it becomes available in 1983. When making comparisons between neighborhoods, the findings remain consistent: 73.8% of those surveyed from Twinbrook expect to use Metrorail; and a corresponding 73.5% from Croydon Park. Table 1 demonstrates according to neighborhood, and subdivision, the percentage of residents who expect to use Metrorail service.

*A 30% response rate is employed because it is statistically reasonable to expect that percentage of the population to respond.

WILL YOU USE METRORAIL SERVICE*
WHEN IT IS AVAILABLE IN 1983?

	<u>YES (%)</u>
<u>TWINBROOK NEIGHBORHOOD</u>	74.6%
Halpine Village	94.7
Rockland	73.5
Twinbrook	79.8
Rockcrest	66.4
 <u>CROYDON PARK NEIGHBORHOOD</u>	 73.7
Croydon Park	74.3
Maryvale	73.8
Burgundy	68.3
Rockville Park	79.3
 <u>SUBDIVISION AVERAGE</u>	 74.3

*Variation in summary totals due to statistical rounding.

TABLE 2
PERCENTAGE OF RECREATION FACILITY USERS BY SUBDIVISION

FACILITY	HALPINE VILLAGE % of Users	OVERLAND % of Users	TWINBROOK % of Users	ROCKCREST % of Users	CROYDON PARK % of Users	MARYVALE % of Users	BURGUNDY % of Users	ROCKVILLE PARK % of Users
Rockcrest Park	0%	18.1%	21.9%	39.4%				
Hillcrest Park	5.3	4.8	6.1	11.0				
Twinbrook Park	63.2	37.3	53.5	9.8				
Municipal Swimming Pool	31.6	21.7	16.7	6.8	40.0	19.0	26.8	44.8
Twinbrook Private Pool	51.6	19.3	38.6	0.5				
Civic Center	57.9	43.4	43.0	4.5	40.0	54.8	39.0	68.9
Maryvale Park					14.3	52.4	43.9	17.2
Pumphouse					28.6	4.8	19.5	13.7
Maryvale Community School					14.3	26.2	9.8	17.2
Total Possible Users (in real numbers)	95	115	570	115	175	210	205	145

--- Indicates question not asked as part of survey to respective neighborhood.

* City of Rockville Planning Department, developed from survey data using SPSS computer model, January 1981.

APPENDIX 7

POPULATION BY AGE AND SEX FOR SUBDIVISION IN THE TWINBROOK NEIGHBORHOOD

Subdivision		<u>Halpine</u>		<u>Rockcrest</u>		<u>Rockland</u>		<u>Twinbrook</u>		<u>Total</u>	
Sex		<u>F</u>	<u>M</u>	<u>F</u>	<u>M</u>	<u>F</u>	<u>M</u>	<u>F</u>	<u>M</u>	<u>F</u>	<u>M</u>
Age Groups											
60+		26	14	218	116	65	35	81	43	390	208
50-59		19	20	146	152	71	73	138	143	374	388
35-49		33	29	247	219	119	106	233	208	632	562
20-34		37	33	277	248	133	120	261	234	708	635
15-19		13	16	79	92	54	63	100	117	246	288
5-14		23	23	103	106	89	93	171	177	385	400
0-4		<u>5</u>	<u>6</u>	<u>96</u>	<u>100</u>	<u>27</u>	<u>28</u>	<u>118</u>	<u>233</u>	<u>246</u>	<u>256</u>
		<u>156 + 141</u>		<u>1166 + 1033</u>		<u>558 + 518</u>		<u>1102 + 1044</u>		<u>2981 + 2737</u>	

Total											
Population		297		2199		1076		2146		5718	

Development of the above estimates is based on the following factors:

1. Distribution by subdivision and age groups, (except 20-59 breakdown) is based on returns of October 10, 1980, Twinbrook Neighborhood Plan survey as evaluated by the City of Rockville, Planning Department.
2. Distribution of the 20-59 age group and City-wide distribution by sex as projected for 1980, by the Maryland-National Capital Park and Planning Commission, as it appears in the City of Rockville Data Book, Table I-C.
3. Total population by subdivision based on use of Preliminary Census Counts showing population and household size as control totals.
4. Housing Units and Household Size Counts

Subdivision:	<u>Halpine</u>	<u>Rockcrest</u>	<u>Rockland</u>	<u>Twinbrook</u>	<u>Total</u>
Total Units	95	788	331	584	1799
Population/ Household	3.14	2.79	3.25	3.67	3.21 (Census)

All estimates prepared by City of Rockville, Planning Department, November 1980.

APPENDIX 8

PARKS AND PLAYGROUNDS SERVING TWINBROOK

Hillcrest Park - 4.4 acres

1150 Crawford Drive

Facilities, etc.: Tot play area; basketball court with 2 baskets; gazebo; older children's play area; baseball field; tables; grills; tetherball poles; summer playground; park benches; toilet facilities; water fountain; and, 1 tennis court.

Rockcrest Park - 6.8 acres

Broadwood Drive

Facilities, etc.: Lighted basketball court; tennis court; and, play area.

Twinbrook Bike Path - 1 mile in length

Begins at 1330 Broadwood Drive and runs parallel to Crawford Drive.

Twinbrook - 6.1 acres

12851 Atlantic Avenue

Facilities, etc.: Heated Community Center with toilet facilities and snack kitchen; tot play area; older children's play area; 2 tennis courts and rally wall; basketball courts with 5 baskets; picnic tables and grill; baseball field; park benches; tetherball poles; small parking lot; summer playground; bike path; and, base for grill.

Civic Center - 100.7 acres

603 Edmonston Drive

Facilities, etc.: Thirty-room Mansion with full kitchen; Social Hall; Formal Gardens; Auditorium; toilet facilities; tot play area; 3 tennis courts; winter sports; picnic facilities; nature trail; and, large parking lots.

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